Swope, Sheridan

From: Schreiber, David
Sent: Wednesday, March 10, 2004 3:06 PM
To: Swope, Sheridan
Cc: O'Bryen, Barbara
Subject: Proposal 09/966,880

The full run that you would requested would take 65 hours of run time. As I mentioned, we are proposing to run seq 9, std & oligo, interference databases and seq 10 and 11, std & oligo, in all databases including interference. The run time for our proposed search is about 31 hours. We have at least 80 hours in each queue including the dedicated rush queue.

David Schreiber, Ph.D.
Scientific and Technical Information Center
Biotech/Chem Library
Old address and phone:
CM1-6A03
703-308-4292
New address and phone:
Remsen E01A61
571-272-2526

Swope, Sheridan

From: Swope, Sheridan
Sent: Wednesday, March 10, 2004 8:10 PM
To: Schreiber, David
Subject: RE: Proposal 09/966,880

David, Thanks for contacting me on this.
Let's do the following.

An oligo search on SID 7 would encompass an oligo search of SID 11-15.

A.
Interference search sid 9; full-length and oligo.
Search and Interference Search sid 10; full-length and oligo.

B.
After I analyze the results:
If there are any oligo hits for Sid 9, align the hits with sid 11.
If there are any oligo hits for Sid 10, align the hits with sid 12-15.

Let me know how long you think A will take.

Thanks!

Note: SID 9 comprises sid 11
SID 10 comprises sid 12-15.

-----Original Message-----
From: Schreiber, David
Sent: Wednesday, March 10, 2004 3:06 PM
To: Swope, Sheridan
Cc: O'Bryen, Barbara
Subject: Proposal 09/966,880

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GenCore version 5.1.6

OM nucleic - nucleic search, using sw model

Run on: March 10, 2004, 13:38:36 ; Search time 47.087 Seconds
(without alignments)
3.483 Million cell updates/sec

Title: US-09-966-880A-9
Perfect score: 5514
Sequence: 1 acagacgaatacatggtcca.....tcaaactcctgacctcagag 5514

Scoring table: IDENTITY_NUC
Gapop 10.0 , Gapext 0.5

Searched: 7 seqs, 14872 residues

Total number of hits satisfying chosen parameters: 14

Minimum DB seq length: 0
Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries

Database : US09966880A.seq:*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	% Query Match	Length	DB	ID	Description
1	5512.8	100.0	5514	1	US-09-966-880A-9	Sequence 9, Appli
c 2	178.6	3.2	2172	1	US-09-966-880A-15	Sequence 15, Appl
c 3	178.6	3.2	6564	1	US-09-966-880A-10	Sequence 10, Appl
4	174.2	3.2	2172	1	US-09-966-880A-15	Sequence 15, Appl
5	174.2	3.2	6564	1	US-09-966-880A-10	Sequence 10, Appl
c 6	109.3	2.0	5514	1	US-09-966-880A-9	Sequence 9, Appli
7	87	1.6	87	1	US-09-966-880A-11	Sequence 11, Appl
c 8	18.3	0.3	148	1	US-09-966-880A-12	Sequence 12, Appl
c 9	17.6	0.3	271	1	US-09-966-880A-13	Sequence 13, Appl
10	16.2	0.3	116	1	US-09-966-880A-14	Sequence 14, Appl
11	16	0.3	271	1	US-09-966-880A-13	Sequence 13, Appl
12	15.4	0.3	148	1	US-09-966-880A-12	Sequence 12, Appl
c 13	14.8	0.3	116	1	US-09-966-880A-14	Sequence 14, Appl
c 14	14.4	0.3	87	1	US-09-966-880A-11	Sequence 11, Appl

ALIGNMENTS

RESULT 1
US-09-966-880A-9
; Sequence 9, Application US/09966880A
; GENERAL INFORMATION:
; APPLICANT: Honjo, Tasuku
; APPLICANT: Muramatsu, Masamichi
; TITLE OF INVENTION: NOVEL CYTIDINE DEAMINASE
; FILE REFERENCE: 06501-088001
; CURRENT APPLICATION NUMBER: US/09/966,880A
; CURRENT FILING DATE: 2001-09-28
; PRIOR APPLICATION NUMBER: PCT/JP00/01918
; PRIOR FILING DATE: 2000-03-28
; PRIOR APPLICATION NUMBER: JP 11-371382
; PRIOR FILING DATE: 1999-12-27
; PRIOR APPLICATION NUMBER: JP 11-178999
; PRIOR FILING DATE: 1999-06-24
; PRIOR APPLICATION NUMBER: JP 11-87192
; PRIOR FILING DATE: 1999-03-29
; NUMBER OF SEQ ID NOS: 36
; SOFTWARE: FastSEQ for Windows Version 4.0
; SEQ ID NO 9
; LENGTH: 5514
; TYPE: DNA
; ORGANISM: Homo sapiens
; FEATURE:
; NAME/KEY: intron
; LOCATION: (1)...(1031)
; FEATURE:
; NAME/KEY: exon
; LOCATION: (1032)...(1118)
; FEATURE:
; NAME/KEY: intron
; LOCATION: (1119)...(5514)
US-09-966-880A-9

Query Match 100.0%; Score 5512.8; DB 1; Length 5514;
Best Local Similarity 100.0%; Pred. No. 1.3e-83;
Matches 5514; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

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Qy          1 ACAGACGAATACATGGTCCAAGCTAGGGCTATTGATTTGAAAATCATCAAGGTATAGATG 60
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db          1 ACAGACGAATACATGGTCCAAGCTAGGGCTATTGATTTGAAAATCATCAAGGTATAGATG 60

Qy         61 GTATCAAAGGCTTGAGGCAGGAAGAGAGCAGAGACCCTAGCTGCATTGCTTAGCATTGCA 120
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db         61 GTATCAAAGGCTTGAGGCAGGAAGAGAGCAGAGACCCTAGCTGCATTGCTTAGCATTGCA 120

Qy        121 TCCCTAGCACCTGGCATAGTTTCCATTAACAGTAGGCATGAAGTATCTACTCAGTGAATA 180
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        121 TCCCTAGCACCTGGCATAGTTTCCATTAACAGTAGGCATGAAGTATCTACTCAGTGAATA 180

Qy        181 AATAGAATGCATATGGGCTACAGTAGGAGAGAGAAATAAAATCTTTAATAGACCAAGTTC 240
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        181 AATAGAATGCATATGGGCTACAGTAGGAGAGAGAAATAAAATCTTTAATAGACCAAGTTC 240

Qy        241 TATGAGAGCACAAAATTAAAGTCTTTTATTTGAAGATCTTAGCCTGTTTTCCAAATTCAG 300
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        241 TATGAGAGCACAAAATTAAAGTCTTTTATTTGAAGATCTTAGCCTGTTTTCCAAATTCAG 300

Qy        301 TGCAGCCAGTTAGACACTGATTCTGTCTGGTGAAACAAGCATTTTTGTATTTTGGGGGAC 360
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        301 TGCAGCCAGTTAGACACTGATTCTGTCTGGTGAAACAAGCATTTTTGTATTTTGGGGGAC 360

Qy        361 TGCTGCTGCTTCTGACTCCAAATTAAGGATTTTTTTTTTTTCTAAAAAAGATGGCTCATG 420
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        361 TGCTGCTGCTTCTGACTCCAAATTAAGGATTTTTTTTTTTTCTAAAAAAGATGGCTCATG 420

Qy        421 CAAAAATCACTCTTTGGTGTAAATATCTAGTCTTCAAGCAATTCTTGTAATGCAATCAGA 480
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        421 CAAAAATCACTCTTTGGTGTAAATATCTAGTCTTCAAGCAATTCTTGTAATGCAATCAGA 480

Qy        481 AAGAAAAAAATCCATGGTTTGGGAGGCAAAATTTTTGTGTTCTAAATTCTATATAACTGA 540
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        481 AAGAAAAAAATCCATGGTTTGGGAGGCAAAATTTTTGTGTTCTAAATTCTATATAACTGA 540

Qy        541 GTTCATTTGCTTAACTGCAAAGCAGGAGCTGCTAGTGCCTGTCTGTACTGAGGTTCAGAG 600
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        541 GTTCATTTGCTTAACTGCAAAGCAGGAGCTGCTAGTGCCTGTCTGTACTGAGGTTCAGAG 600

Qy        601 AGACTGTGGGAATATGGGGGAATTAGAGGCTATCTGAGGCTCTTCAACACAATAACCCAA 660
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        601 AGACTGTGGGAATATGGGGGAATTAGAGGCTATCTGAGGCTCTTCAACACAATAACCCAA 660

Qy        661 GAAGCTATTTAAATGCTCTTTAAGGTATTTACATAAATATTACTATTCTCATTGTGCTTT 720
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        661 GAAGCTATTTAAATGCTCTTTAAGGTATTTACATAAATATTACTATTCTCATTGTGCTTT 720
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Qy      721 TATTTTGTGTTATCATGATTATAATTGAAGTGTCTACTGTTACTGCCTCCTGATCTTTGC 780
Db      721 TATTTTGTGTTATCATGATTATAATTGAAGTGTCTACTGTTACTGCCTCCTGATCTTTGC 780

Qy      781 TAGCTATGGAGCATGGACTGGGCTTTTAGAGCAGCAGCCCCAAAGGAACCTAAACATTAA 840
Db      781 TAGCTATGGAGCATGGACTGGGCTTTTAGAGCAGCAGCCCCAAAGGAACCTAAACATTAA 840

Qy      841 AGCAGAGCTGCCCTCAATGGTTTAACCTGTGTGACTCTGCCTATGACAGCCCCACCCACC 900
Db      841 AGCAGAGCTGCCCTCAATGGTTTAACCTGTGTGACTCTGCCTATGACAGCCCCACCCACC 900

Qy      901 CATCTTCACTGGATCCAAATCAGGAGCAAGGCCGTTGGGGTACCTGGTGGGGGTGATGCT 960
Db      901 CATCTTCACTGGATCCAAATCAGGAGCAAGGCCGTTGGGGTACCTGGTGGGGGTGATGCT 960

Qy      961 GTCAGGGGAGGAGCCCAAAAGGGCAAGCTCAAATTTGAATGTGAAGGGCCAATGCACTGT 1020
Db      961 GTCAGGGGAGGAGCCCAAAAGGGCAAGCTCAAATTTGAATGTGAAGGGCCAATGCACTGT 1020

Qy     1021 CAGACTGAGACAGAGAACCATCATTAATTGAAGTGAGATTTTTCTGGCCTGAGACTTGCA 1080
Db     1021 CAGACTGAGACAGAGAACCATCATTAATTGAAGTGAGATTTTTCTGGCCTGAGACTTGCA 1080

Qy     1081 GGGAGGCAAGAAGACACTCTGGACACCACTATGGACAGGTAAAGAGGCAGTCTTCTCGTG 1140
Db     1081 GGGAGGCAAGAAGACACTCTGGACACCACTATGGACAGGTAAAGAGGCAGTCTTCTCGTG 1140

Qy     1141 GGTGATTGCACTGGCCTTCCTCTCAGAGCAAATCTGAGTAATGAGACTGGTAGCTATCCC 1200
Db     1141 GGTGATTGCACTGGCCTTCCTCTCAGAGCAAATCTGAGTAATGAGACTGGTAGCTATCCC 1200

Qy     1201 TTTCTCTCATGTAACTGTCTGACTGATAAGATCAGCTTGATCAATATGCATATATATTTTT 1260
Db     1201 TTTCTCTCATGTAACTGTCTGACTGATAAGATCAGCTTGATCAATATGCATATATATTTT 1260

Qy     1261 TTGATCTGTCTCCTTTTCTTCTATTCAGATCTTATACGCTGTCAGCCCAATTCTTTCTGT 1320
Db     1261 TTGATCTGTCTCCTTTTCTTCTATTCAGATCTTATACGCTGTCAGCCCAATTCTTTCTGT 1320

Qy     1321 TTCAGACTTCTCTTGATTTCCCTCTTTTTCATGTGGCAAAAGAAGTAGTGCGTACAATGT 1380
Db     1321 TTCAGACTTCTCTTGATTTCCCTCTTTTTCATGTGGCAAAAGAAGTAGTGCGTACAATGT 1380

Qy     1381 ACTGATTCGTCCTGAGATTTGTACCATGGTTGAAACTAATTTATGGTAATAATATTAACA 1440
Db     1381 ACTGATTCGTCCTGAGATTTGTACCATGGTTGAAACTAATTTATGGTAATAATATTAACA 1440

Qy     1441 TAGCAAATCTTTAGAGACTCAAATCATGAAAAGGTAATAGCAGTACTGTACTAAAAACGG 1500
Db     1441 TAGCAAATCTTTAGAGACTCAAATCATGAAAAGGTAATAGCAGTACTGTACTAAAAACGG 1500

Qy     1501 TAGTGCTAATTTTCGTAATAATTTTGTAAATATTCAACAGTAAAACAACTTGAAGACACA 1560
Db     1501 TAGTGCTAATTTTCGTAATAATTTTGTAAATATTCAACAGTAAAACAACTTGAAGACACA 1560

Qy     1561 CTTTCCTAGGGAGGCGTTACTGAAATAATTTAGCTATAGTAAGAAAATTTGTAATTTTAG 1620
Db     1561 CTTTCCTAGGGAGGCGTTACTGAAATAATTTAGCTATAGTAAGAAAATTTGTAATTTTAG 1620

Qy     1621 AAATGCCAAGCATTCTAAATTAATTGCTTGAAAGTCACTATGATTGTGTCCATTATAAGG 1680
Db     1621 AAATGCCAAGCATTCTAAATTAATTGCTTGAAAGTCACTATGATTGTGTCCATTATAAGG 1680

Qy     1681 AGACAAATTCATTCAAGCAAGTTATTTAATGTTAAAGGCCCAATTGTTAGGCAGTTAATG 1740
Db     1681 AGACAAATTCATTCAAGCAAGTTATTTAATGTTAAAGGCCCAATTGTTAGGCAGTTAATG 1740

Qy     1741 GCACTTTTACTATTAACTAATCTTTCCATTTGTTCAGACGTAGCTTAACTTACCTCTTAG 1800
Db     1741 GCACTTTTACTATTAACTAATCTTTCCATTTGTTCAGACGTAGCTTAACTTACCTCTTAG 1800

Qy     1801 GTGTGAATTTGGTTAAGGTCCTCATAATGTCTTTATGTGCAGTTTTTGATAGGTTATTGT 1860
Db     1801 GTGTGAATTTGGTTAAGGTCCTCATAATGTCTTTATGTGCAGTTTTTGATAGGTTATTGT 1860

Qy     1861 CATAGAACTTATTCTATTCCTACATTTATGATTACTATGGATGTATGAGAATAACACCTA 1920
Db     1861 CATAGAACTTATTCTATTCCTACATTTATGATTACTATGGATGTATGAGAATAACACCTA 1920

Qy     1921 ATCCTTATACTTTACCTCAATTTAACTCCTTTATAAAGAACTTACATTACAGAATAAAGA 1980
Db     1921 ATCCTTATACTTTACCTCAATTTAACTCCTTTATAAAGAACTTACATTACAGAATAAAGA 1980

Qy     1981 TTTTTTAAAAATATATTTTTTTTGTAGAGACAGGGTCTTAGCCCAGCCGAGGCTGGTCTCT 2040
Db     1981 TTTTTTAAAAATATATTTTTTTTGTAGAGACAGGGTCTTAGCCCAGCCGAGGCTGGTCTCT 2040

Qy     2041 AAGTCCTGGCCCAAGCGATCCTCCTGCCTGGGCCTCCTAAAGTGCTGGAATTATAGACAT 2100
Db     2041 AAGTCCTGGCCCAAGCGATCCTCCTGCCTGGGCCTCCTAAAGTGCTGGAATTATAGACAT 2100

Qy     2101 GAGCCATCACATCCAATATACAGAATAAAGATTTTTAATGGAGGATTTAATGTTCTTCAG 2160
Db     2101 GAGCCATCACATCCAATATACAGAATAAAGATTTTTAATGGAGGATTTAATGTTCTTCAG 2160

Qy     2161 AAAATTTTCTTGAGGTCAGACAATGTCAAATGTCTCCTCAGTTTACACTGAGATTTTGAA 2220
Db     2161 AAAATTTTCTTGAGGTCAGACAATGTCAAATGTCTCCTCAGTTTACACTGAGATTTTGAA 2220

Qy     2221 AACAAGTCTGAGCTATAGGTCCTTGTGAAGGGTCCATTGGAAATACTTGTTCAAAGTAAA 2280
Db     2221 AACAAGTCTGAGCTATAGGTCCTTGTGAAGGGTCCATTGGAAATACTTGTTCAAAGTAAA 2280

Qy     2281 ATGGAAAGCAAAGGTAAAATCAGCAGTTGAAATTCAGAGAAAGACAGAAAAGGAGAAAAG 2340
Db     2281 ATGGAAAGCAAAGGTAAAATCAGCAGTTGAAATTCAGAGAAAGACAGAAAAGGAGAAAAG 2340

Qy     2341 ATGAAATTCAACAGGACAGAAGGGAAATATATTATCATTAAGGAGGACAGTATCTGTAGA 2400
Db     2341 ATGAAATTCAACAGGACAGAAGGGAAATATATTATCATTAAGGAGGACAGTATCTGTAGA 2400

Qy     2401 GCTCATTAGTGATGGCAAAATGACTTGGTCAGGATTATTTTTAACCCGCTTGTTTCTGGT 2460
Db     2401 GCTCATTAGTGATGGCAAAATGACTTGGTCAGGATTATTTTTAACCCGCTTGTTTCTGGT 2460

Qy     2461 TTGCACGGCTGGGGATGCAGCTAGGGTTCTGCCTCAGGGAGCACAGCTGTCCAGAGCAGC 2520
Db     2461 TTGCACGGCTGGGGATGCAGCTAGGGTTCTGCCTCAGGGAGCACAGCTGTCCAGAGCAGC 2520

Qy     2521 TGTCAGCCTGCAAGCCTGAAACACTCCCTCGGTAAAGTCCTTCCTACTCAGGACAGAAAT 2580
Db     2521 TGTCAGCCTGCAAGCCTGAAACACTCCCTCGGTAAAGTCCTTCCTACTCAGGACAGAAAT 2580

Qy     2581 GACGAGAACAGGGAGCTGGAAACAGGCCCCTAACCAGAGAAGGGAAGTAATGGATCAACA 2640
Db     2581 GACGAGAACAGGGAGCTGGAAACAGGCCCCTAACCAGAGAAGGGAAGTAATGGATCAACA 2640

Qy     2641 AAGTTAACTAGCAGGTCAGGATCACGCAATTCATTTCACTCTGACTGGTAACATGTGACA 2700
Db     2641 AAGTTAACTAGCAGGTCAGGATCACGCAATTCATTTCACTCTGACTGGTAACATGTGACA 2700

Qy     2701 GAAACAGTGTAGGCTTATTGTATTTTCATGTAGAGTAGGACCCAAAAATCCACCCAAAGT 2760
Db     2701 GAAACAGTGTAGGCTTATTGTATTTTCATGTAGAGTAGGACCCAAAAATCCACCCAAAGT 2760

Qy     2761 CCTTTATCTATGCCACATCCTTCTTATCTATACTTCCAGGACACTTTTTCTTCCTTATGA 2820
Db     2761 CCTTTATCTATGCCACATCCTTCTTATCTATACTTCCAGGACACTTTTTCTTCCTTATGA 2820

Qy     2821 TAAGGCTCTCTCTCTCTCCACACACACACACACACACACACACACACACACACACACACA 2880
Db     2821 TAAGGCTCTCTCTCTCTCCACACACACACACACACACACACACACACACACACACACA 2880

Qy     2881 CACAAACACACACCCCGCCAACCAAGGTGCATGTAAAAAGATGTAGATTCCTCTGCCTTT 2940
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Db       2881 CACAAACACACACCCCGCCAACCAAGGTGCATGTAAAAAGATGTAGATTCCTCTGCCTTT 2940
Qy       2941 CTCATCTACACAGCCCAGGAGGGTAAGTTAATATAAGAGGGATTTATTGGTAAGAGATGA 3000
Db       2941 CTCATCTACACAGCCCAGGAGGGTAAGTTAATATAAGAGGGATTTATTGGTAAGAGATGA 3000
Qy       3001 TGCTTAATCTGTTTAACACTGGGCCTCAAAGAGAGAATTTCTTTTCTTCTGTACTTATTA 3060
Db       3001 TGCTTAATCTGTTTAACACTGGGCCTCAAAGAGAGAATTTCTTTTCTTCTGTACTTATTA 3060
Qy       3061 AGCACCTATTATGTGTTGAGCTTATATATACAAAGGGTTATTATATGCTAATATAGTAAT 3120
Db       3061 AGCACCTATTATGTGTTGAGCTTATATATACAAAGGGTTATTATATGCTAATATAGTAAT 3120
Qy       3121 AGTAATGKTGGTTGGTACTATGGTAATTACCATAAAAATTAWTATCCTTTTAAAATAAAG 3180
Db       3121 AGTAATGKTGGTTGGTACTATGGTAATTACCATAAAAATTAWTATCCTTTTAAAATAAAG 3180
Qy       3181 CTAATTATTATTGGATCTTTTTTAGTATTCATTTTATGTTTTTTATGTTTTTGATTTTTT 3240
Db       3181 CTAATTATTATTGGATCTTTTTTAGTATTCATTTTATGTTTTTTATGTTTTTGATTTTTT 3240
Qy       3241 AAAAGACAATCTCACCCTGTTACCCAGGCTGGAGTGCAGTGGTGCAATCATAGCTTTCTG 3300
Db       3241 AAAAGACAATCTCACCCTGTTACCCAGGCTGGAGTGCAGTGGTGCAATCATAGCTTTCTG 3300
Qy       3301 CAGTCTTGAACTCCTGGGCTCAAGCAATCCTCCTGCCTTGGCCTCCCAAAGTGTTGGGAT 3360
Db       3301 CAGTCTTGAACTCCTGGGCTCAAGCAATCCTCCTGCCTTGGCCTCCCAAAGTGTTGGGAT 3360
Qy       3361 ACAGTCATGAGCCACTGCATCTGGCCTAGGATCCATTTAGATTAAAATATGCATTTTAAA 3420
Db       3361 ACAGTCATGAGCCACTGCATCTGGCCTAGGATCCATTTAGATTAAAATATGCATTTTAAA 3420
Qy       3421 TTTTAAAATAATATGGCTAATTTTTACCTTATGTAATGTGTATACTGGTAATAAATCTAG 3480
Db       3421 TTTTAAAATAATATGGCTAATTTTTACCTTATGTAATGTGTATACTGGTAATAAATCTAG 3480
Qy       3481 TTTGCTGCCTAAAGTTTAAAGTGCTTTCCAATAAGCTTCATGTACGTGAGGGGAGACATT 3540
Db       3481 TTTGCTGCCTAAAGTTTAAAGTGCTTTCCAATAAGCTTCATGTACGTGAGGGGAGACATT 3540
Qy       3541 TAAAGTGAAACAGACAGCCAGGTGTGGTGGCTCACGCCTGTAATCCCAGCACTCTGGGAG 3600
Db       3541 TAAAGTGAAACAGACAGCCAGGTGTGGTGGCTCACGCCTGTAATCCCAGCACTCTGGGAG 3600
Qy       3601 GCTGAGGTGGGTGGATCGCTTGAGCCCTGGAGTTCAAGACCAGCCTGAGCAACATGGCAA 3660
Db       3601 GCTGAGGTGGGTGGATCGCTTGAGCCCTGGAGTTCAAGACCAGCCTGAGCAACATGGCAA 3660
Qy       3661 AACCCTGTTTCTATAACAAAAATTAGCCGGGCATGGTGGCATGTGCCTGTGGTCCCAGCT 3720
Db       3661 AACCCTGTTTCTATAACAAAAATTAGCCGGGCATGGTGGCATGTGCCTGTGGTCCCAGCT 3720
Qy       3721 ACTAGGGGGCTGAGGCAGGAGAATCTTTGGAGCCCAGGAGGTCAAGGCTGCACTGAGCAG 3780
Db       3721 ACTAGGGGGCTGAGGCAGGAGAATCTTTGGAGCCCAGGAGGTCAAGGCTGCACTGAGCAG 3780
Qy       3781 TGCTTGCGCCACTGCACTCCAGCCTGGGTGACAGGACCAGACCTTGCCTCAAAAAAATAA 3840
Db       3781 TGCTTGCGCCACTGCACTCCAGCCTGGGTGACAGGACCAGACCTTGCCTCAAAAAAATAA 3840
Qy       3841 GAAGAAAAATTAAAAATAAATGGAAACAACTACAAAGAGCTGTTGTCCTAGATGAGCTAC 3900
Db       3841 GAAGAAAAATTAAAAATAAATGGAAACAACTACAAAGAGCTGTTGTCCTAGATGAGCTAC 3900
Qy       3901 TTAGTTAGGCTGATATTTTGGTATTTAACTTTTAAAGTCAGGGTCTGTCACCTGCACTAC 3960
Db       3901 TTAGTTAGGCTGATATTTTGGTATTTAACTTTTAAAGTCAGGGTCTGTCACCTGCACTAC 3960
Qy       3961 ATTATTAAAATATCAATTCTCAATGTATATCCACACAAAGACTGGTACGTGAATGTTCAT 4020
Db       3961 ATTATTAAAATATCAATTCTCAATGTATATCCACACAAAGACTGGTACGTGAATGTTCAT 4020

Qy       4021 AGTACCTTTATTCACAAAACCCCAAAGTAGAGACTATCCAAATATCCATCAACAAGTGAA 4080
Db       4021 AGTACCTTTATTCACAAAACCCCAAAGTAGAGACTATCCAAATATCCATCAACAAGTGAA 4080
Qy       4081 CAAATAAACAAAATGTGCTATATCCATGCAATGGAATACCACCCTGCAGTACAAAGGAAG 4140
Db       4081 CAAATAAACAAAATGTGCTATATCCATGCAATGGAATACCACCCTGCAGTACAAAGGAAG 4140
Qy       4141 AAGCTACTTGGGGATGAATCCCAAAGTCATGACGCTAAATGAAAGAGTCAGACATGAAGG 4200
Db       4141 AAGCTACTTGGGGATGAATCCCAAAGTCATGACGCTAAATGAAAGAGTCAGACATGAAGG 4200
Qy       4201 AGGAGATAATGTATGCCATACGAAATTCTAGAAAATGAAAGTAACTTATAGTTACAGAAA 4260
Db       4201 AGGAGATAATGTATGCCATACGAAATTCTAGAAAATGAAAGTAACTTATAGTTACAGAAA 4260
Qy       4261 GCAAATCAGGGCAGGCATAGAGGCTCACACCTGTAATCCCAGCACTTTGAGAGGCCACGT 4320
Db       4261 GCAAATCAGGGCAGGCATAGAGGCTCACACCTGTAATCCCAGCACTTTGAGAGGCCACGT 4320
Qy       4321 GGGAAGATTGCTAGAACTCAGGAGTTCAAGACCAGCCTGGGCAACACAGTGAAACTCCAT 4380
Db       4321 GGGAAGATTGCTAGAACTCAGGAGTTCAAGACCAGCCTGGGCAACACAGTGAAACTCCAT 4380
Qy       4381 TCTCCACAAAAATGGGAAAAAAAGAAAGCAAATCAGTGGTTGTCCTGTGGGGAGGGGAAG 4440
Db       4381 TCTCCACAAAAATGGGAAAAAAAGAAAGCAAATCAGTGGTTGTCCTGTGGGGAGGGGAAG 4440
Qy       4441 GACTGCAAAGAGGGAAGAAGCTCTGGTGGGGTGAGGGTGGTGATTCAGGTTCTGTATCCT 4500
Db       4441 GACTGCAAAGAGGGAAGAAGCTCTGGTGGGGTGAGGGTGGTGATTCAGGTTCTGTATCCT 4500
Qy       4501 GACTGTGGTAGCAGTTTGGGGTGTTTACATCCAAAAATATTCGTAGAATTATGCATCTTA 4560
Db       4501 GACTGTGGTAGCAGTTTGGGGTGTTTACATCCAAAAATATTCGTAGAATTATGCATCTTA 4560
Qy       4561 AATGGGTGGAGTTTACTGTATGTAAATTATACCTCAATGTAAGAAAAAATAATGTGTAAG 4620
Db       4561 AATGGGTGGAGTTTACTGTATGTAAATTATACCTCAATGTAAGAAAAAATAATGTGTAAG 4620
Qy       4621 AAAAGTTTCAATTCTCTTGCCAGCAAACGTTATTCAAATTCCTGAGCCCTTTACTTCGCA 4680
Db       4621 AAAAGTTTCAATTCTCTTGCCAGCAAACGTTATTCAAATTCCTGAGCCCTTTACTTCGCA 4680
Qy       4681 AATTCTCTGCACTTCTGCCCCGTACCATTAGGTGACAGCACTAGCTCCACAAATTGGATA 4740
Db       4681 AATTCTCTGCACTTCTGCCCCGTACCATTAGGTGACAGCACTAGCTCCACAAATTGGATA 4740
Qy       4741 AATGCATTTCTGGAAAAGACTAGGGACAAAATCCAGGCATCACTTGTGCTTTCATATCAA 4800
Db       4741 AATGCATTTCTGGAAAAGACTAGGGACAAAATCCAGGCATCACTTGTGCTTTCATATCAA 4800
Qy       4801 CCACGCTGTACAGCTTGTGTTGCTGTCTGCAGCTGCAATGGGGACTCTTGATTTCTTTAA 4860
Db       4801 CCACGCTGTACAGCTTGTGTTGCTGTCTGCAGCTGCAATGGGGACTCTTGATTTCTTTAA 4860
Qy       4861 GGAAACTTGGGTTACCAGAGTATTTCCACAAATGCTATTCAAATTAGTGCTTATGATATG 4920
Db       4861 GGAAACTTGGGTTACCAGAGTATTTCCACAAATGCTATTCAAATTAGTGCTTATGATATG 4920
Qy       4921 CAAGACACTGTGCTAGGAGCCAGAAAACAAAGAGGAGGAGAAATCAGTCATTATGTGGGA 4980
Db       4921 CAAGACACTGTGCTAGGAGCCAGAAAACAAAGAGGAGGAGAAATCAGTCATTATGTGGGA 4980
Qy       4981 ACAACATAGCAAGATATTTAGATCATTTTGACTAGTTAAAAAAGCAGCAGAGTACAAAAT 5040
Db       4981 ACAACATAGCAAGATATTTAGATCATTTTGACTAGTTAAAAAAGCAGCAGAGTACAAAAT 5040
Qy       5041 CACACATGCAATCAGTATAATCCAAATCATGTAAATATGTGCCTGTAGAAAGACTAGAGG 5100
Db       5041 CACACATGCAATCAGTATAATCCAAATCATGTAAATATGTGCCTGTAGAAAGACTAGAGG 5100
```

```
Qy       5101 AATAAACACAAGAATCTTAACAGTCATTGTCATTAGACACTAAGTCTAATTATTATTATT 5160
             ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db       5101 AATAAACACAAGAATCTTAACAGTCATTGTCATTAGACACTAAGTCTAATTATTATTATT 5160

Qy       5161 AGACACTATGATATTTGAGATTTAAAAAATCTTTAATATTTTAAAATTTAGAGCTCTTCT 5220
             ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db       5161 AGACACTATGATATTTGAGATTTAAAAAATCTTTAATATTTTAAAATTTAGAGCTCTTCT 5220

Qy       5221 ATTTTTCCATAGTATTCAAGTTTGACAATGATCAAGTATTACTCTTTCTTTTTTTTTTTT 5280
             ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db       5221 ATTTTTCCATAGTATTCAAGTTTGACAATGATCAAGTATTACTCTTTCTTTTTTTTTTTT 5280

Qy       5281 TTTTTTTTTTTTTGAGATGGAGTTTTGGTCTTGTTGCCCATGCTGGAGTGGAATGGCATG 5340
             ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db       5281 TTTTTTTTTTTTTGAGATGGAGTTTTGGTCTTGTTGCCCATGCTGGAGTGGAATGGCATG 5340

Qy       5341 AYCATAGCTCACTGCAACCTCCACCTCCTGGGTTCAAGCAAAGCTGTCGCCTCAGCCTCC 5400
             ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db       5341 AYCATAGCTCACTGCAACCTCCACCTCCTGGGTTCAAGCAAAGCTGTCGCCTCAGCCTCC 5400

Qy       5401 CGGGTAGATGGGATTACAGGCGCCCACCACCACACTCGGCTAATGTTTGTATTTTTAGTA 5460
             ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db       5401 CGGGTAGATGGGATTACAGGCGCCCACCACCACACTCGGCTAATGTTTGTATTTTTAGTA 5460

Qy       5461 GAGATGGGGTTTCACCATGTTGGCCAGGCTGGTCTCAAACTCCTGACCTCAGAG 5514
             ||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db       5461 GAGATGGGGTTTCACCATGTTGGCCAGGCTGGTCTCAAACTCCTGACCTCAGAG 5514
```

RESULT 2
US-09-966-880A-15/c
; Sequence 15, Application US/09966880A
; GENERAL INFORMATION:
; APPLICANT: Honjo, Tasuku
; APPLICANT: Muramatsu, Masamichi
; TITLE OF INVENTION: NOVEL CYTIDINE DEAMINASE
; FILE REFERENCE: 06501-088001
; CURRENT APPLICATION NUMBER: US/09/966,880A
; CURRENT FILING DATE: 2001-09-28
; PRIOR APPLICATION NUMBER: PCT/JP00/01918
; PRIOR FILING DATE: 2000-03-28
; PRIOR APPLICATION NUMBER: JP 11-371382
; PRIOR FILING DATE: 1999-12-27
; PRIOR APPLICATION NUMBER: JP 11-178999
; PRIOR FILING DATE: 1999-06-24
; PRIOR APPLICATION NUMBER: JP 11-87192
; PRIOR FILING DATE: 1999-03-29
; NUMBER OF SEQ ID NOS: 36
; SOFTWARE: FastSEQ for Windows Version 4.0
; SEQ ID NO 15
; LENGTH: 2172
; TYPE: DNA
; ORGANISM: Homo sapiens
US-09-966-880A-15

Query Match 3.2%; Score 178.6; DB 1; Length 2172;
Best Local Similarity 83.1%; Pred. No. 1.1;
Matches 202; Conservative 1; Mismatches 40; Indels 0; Gaps 0;

```
Qy       5270 TTTTTTTTTTTTTTTTTTTTTTTTGAGATGGAGTTTTGGTCTTGTTGCCCATGCTGGAGT 5329
             | | | |||||||||||||||||| |||||  |||| ||| |||||| ||||| ||||||||
Db       1514 TCTCTCTTTTTTTTTTTTTTTCTGAGACAGAGTCTTGCTCTTGTCGCCCAGGCTGGAGT 1455

Qy       5330 GGAATGGCATGAYCATAGCTCACTGCAACCTCCACCTCCTGGGTTCAAGCAAAGCTGTCG 5389
             | || |||| ||:|  |||| ||||||||||||||||||||||||||||| |  ||   |
Db       1454 GCAACGGCACGATCTCAGCTTACTGCAACCTCCACCTCCTGGGTTCAAGCGATTCTCCTG 1395

Qy       5390 CCTCAGCCTCCCGGGTAGATGGGATTACAGGCGCCCACCACCACACTCGGCTAATGTTTG 5449
             |||||||||||  |||| ||||||||||| ||| | ||||| |  ||||||| ||||
Db       1394 CCTCAGCCTCCCAAGTAGCTGGGATTACAGGTGCCTGCTACCACGCCTGGCTAATTTTTG 1335

Qy       5450 TATTTTTAGTAGAGATGGGGTTTCACCATGTTGGCCAGGCTGGTCTCAAACTCCTGACCT 5509
              ||||| |||| ||| |||||||  ||||||||||||||||||||||||||||||||||
```

```
Db       1334 CATTTTGAGTACAGACGGGGTTTTGCCATGTTGGCCAGGCTGGTCTCAAACTCCTGACCA 1275

Qy       5510 CAG 5512
              |||
Db       1274 CAG 1272
```

RESULT 3
US-09-966-880A-10/c
; Sequence 10, Application US/09966880A
; GENERAL INFORMATION:
; APPLICANT: Honjo, Tasuku
; APPLICANT: Muramatsu, Masamichi
; TITLE OF INVENTION: NOVEL CYTIDINE DEAMINASE
; FILE REFERENCE: 06501-088001
; CURRENT APPLICATION NUMBER: US/09/966,880A
; CURRENT FILING DATE: 2001-09-28
; PRIOR APPLICATION NUMBER: PCT/JP00/01918
; PRIOR FILING DATE: 2000-03-28
; PRIOR APPLICATION NUMBER: JP 11-371382
; PRIOR FILING DATE: 1999-12-27
; PRIOR APPLICATION NUMBER: JP 11-178999
; PRIOR FILING DATE: 1999-06-24
; PRIOR APPLICATION NUMBER: JP 11-87192
; PRIOR FILING DATE: 1999-03-29
; NUMBER OF SEQ ID NOS: 36
; SOFTWARE: FastSEQ for Windows Version 4.0
; SEQ ID NO 10
; LENGTH: 6564
; TYPE: DNA
; ORGANISM: Homo sapiens
US-09-966-880A-10

Query Match 3.2%; Score 178.6; DB 1; Length 6564;
Best Local Similarity 83.1%; Pred. No. 1.8;
Matches 202; Conservative 1; Mismatches 40; Indels 0; Gaps 0;

```
Qy       5270 TTTTTTTTTTTTTTTTTTTTTTTTGAGATGGAGTTTTGGTCTTGTTGCCCATGCTGGAGT 5329
             | | | |||||||||||||||||| |||||  |||| ||| |||||| ||||| ||||||||
Db       5254 TCTCTCTTTTTTTTTTTTTTTCTGAGACAGAGTCTTGCTCTTGTCGCCCAGGCTGGAGT 5195

Qy       5330 GGAATGGCATGAYCATAGCTCACTGCAACCTCCACCTCCTGGGTTCAAGCAAAGCTGTCG 5389
             | || |||| ||:|  |||| ||||||||||||||||||||||||||||| |  ||   |
Db       5194 GCAACGGCACGATCTCAGCTTACTGCAACCTCCACCTCCTGGGTTCAAGCGATTCTCCTG 5135

Qy       5390 CCTCAGCCTCCCGGGTAGATGGGATTACAGGCGCCCACCACCACACTCGGCTAATGTTTG 5449
             |||||||||||  |||| ||||||||||| ||| | ||||| |  ||||||| ||||
Db       5134 CCTCAGCCTCCCAAGTAGCTGGGATTACAGGTGCCTGCTACCACGCCTGGCTAATTTTTG 5075

Qy       5450 TATTTTTAGTAGAGATGGGGTTTCACCATGTTGGCCAGGCTGGTCTCAAACTCCTGACCT 5509
              ||||| |||| ||| |||||||  ||||||||||||||||||||||||||||||||||
Db       5074 CATTTTGAGTACAGACGGGGTTTTGCCATGTTGGCCAGGCTGGTCTCAAACTCCTGACCA 5015

Qy       5510 CAG 5512
              |||
Db       5014 CAG 5012
```

RESULT 4
US-09-966-880A-15
; Sequence 15, Application US/09966880A
; GENERAL INFORMATION:
; APPLICANT: Honjo, Tasuku
; APPLICANT: Muramatsu, Masamichi
; TITLE OF INVENTION: NOVEL CYTIDINE DEAMINASE
; FILE REFERENCE: 06501-088001
; CURRENT APPLICATION NUMBER: US/09/966,880A
; CURRENT FILING DATE: 2001-09-28
; PRIOR APPLICATION NUMBER: PCT/JP00/01918
; PRIOR FILING DATE: 2000-03-28
; PRIOR APPLICATION NUMBER: JP 11-371382
; PRIOR FILING DATE: 1999-12-27
; PRIOR APPLICATION NUMBER: JP 11-178999

```
;  PRIOR FILING DATE: 1999-06-24
;  PRIOR APPLICATION NUMBER: JP 11-87192
;  PRIOR FILING DATE: 1999-03-29
;  NUMBER OF SEQ ID NOS: 36
;  SOFTWARE: FastSEQ for Windows Version 4.0
; SEQ ID NO 15
;    LENGTH: 2172
;    TYPE: DNA
;    ORGANISM: Homo sapiens
US-09-966-880A-15

  Query Match             3.2%;  Score 174.2;  DB 1;  Length 2172;
  Best Local Similarity   74.8%;  Pred. No. 1.3;
  Matches  255;  Conservative    0;  Mismatches   78;  Indels    8;  Gaps    3;

Qy       3542 AAAGTGAAACAGACAGCCAGGTGTGGTGGCTCACGCCTGTAATCCCAGCACTCTGGGAGG 3601
             |||| | | |||  ||| || |||||||||||||||||||||||||||||||| |||||||
Db       1194 AAAGAAAGAGAGAGGGCCGGGCGTGGTGGCTCACGCCTGTAATCCCAGCACTTTGGGAGG 1253

Qy       3602 CTGAGGTGGGTGGATCGCTTGAGCCCTGGAGTTCAAGACCAGCCTGAGCAACATGGCAAA 3661
             | |||  ||| ||||| | || |  | ||||||  |||||||||||  ||||||||||||
Db       1254 CCGAGCCGGGCGGATCACCTGTGGTCAGGAGTTTGAGACCAGCCTGGCCAACATGGCAAA 1313

Qy       3662 ACCCTGTTTCT------ATAACAAAAATTAGCCGGGCATGGTGGCATGTGCCTGTGGTCC 3715
             |||| || | |       |  ||||||||||||| ||| |||| ||| |  |||||  |||
Db       1314 ACCCCGTCTGTACTCAAAATGCAAAAATTAGCCAGGCGTGGTGAGCAGGCACCTGTAATCC 1373

Qy       3716 CAGCTACTAGGG-GGCTGAGGCAGGAGAATCTTTGGAGCCCAGGAGGTCAAGGCTGCACT 3774
             |||||||| ||| |||||||||||||||||  | || ||||||||||  ||| |||| |
Db       1374 CAGCTACTTGGGAGGCTGAGGCAGGAGAATCGCTTGAACCCAGGAGGTGGAGGTTGCAGT 1433

Qy       3775 GAGCAGTGCTTGCGCCACTGCACTCCAGCCTGGGTGACAGGA-CCAGACCTTGCCTCAAA 3833
              ||| | | | | |||  |||||||||||||||| |||| || | ||||  || ||||  |
Db       1434 AAGCTGAGATCGTGCCGTTGCACTCCAGCCTGGGCGACAAGAGCAAGACTCTGTCTCAGA 1493

Qy       3834 AAAATAAGAAGAAAAATTAAAAATAAATGGAAACAACTACA 3874
              |||| || || ||||   | | | | |   | | ||| | |
Db       1494 AAAAAAAAAAAAAAAGAGAGAGAGAGAGAAAGAGAACAATA 1534


RESULT 5
US-09-966-880A-10
; Sequence 10, Application US/09966880A
; GENERAL INFORMATION:
;  APPLICANT: Honjo, Tasuku
;  APPLICANT:  Muramatsu, Masamichi
;  TITLE OF INVENTION: NOVEL CYTIDINE DEAMINASE
;  FILE REFERENCE: 06501-088001
;  CURRENT APPLICATION NUMBER: US/09/966,880A
;  CURRENT FILING DATE:  2001-09-28
;  PRIOR APPLICATION NUMBER: PCT/JP00/01918
;  PRIOR FILING DATE: 2000-03-28
;  PRIOR APPLICATION NUMBER: JP 11-371382
;  PRIOR FILING DATE: 1999-12-27
;  PRIOR APPLICATION NUMBER: JP 11-178999
;  PRIOR FILING DATE: 1999-06-24
;  PRIOR APPLICATION NUMBER: JP 11-87192
;  PRIOR FILING DATE: 1999-03-29
;  NUMBER OF SEQ ID NOS: 36
;  SOFTWARE: FastSEQ for Windows Version 4.0
; SEQ ID NO 10
;    LENGTH: 6564
;    TYPE: DNA
;    ORGANISM: Homo sapiens
US-09-966-880A-10

  Query Match             3.2%;  Score 174.2;  DB 1;  Length 6564;
  Best Local Similarity   74.8%;  Pred. No. 2;
  Matches  255;  Conservative    0;  Mismatches   78;  Indels    8;  Gaps    3;

Qy       3542 AAAGTGAAACAGACAGCCAGGTGTGGTGGCTCACGCCTGTAATCCCAGCACTCTGGGAGG 3601
             |||| | | |||  ||| || |||||||||||||||||||||||||||||||| |||||||
Db       4934 AAAGAAAGAGAGAGGGCCGGGCGTGGTGGCTCACGCCTGTAATCCCAGCACTTTGGGAGG 4993

Qy       3602 CTGAGGTGGGTGGATCGCTTGAGCCCTGGAGTTCAAGACCAGCCTGAGCAACATGGCAAA 3661
             | |||  ||| ||||| | || |  | ||||||  |||||||||||  ||||||||||||
Db       4994 CCGAGCCGGGCGGATCACCTGTGGTCAGGAGTTTGAGACCAGCCTGGCCAACATGGCAAA 5053

Qy       3662 ACCCTGTTTCT------ATAACAAAAATTAGCCGGGCATGGTGGCATGTGCCTGTGGTCC 3715
             |||| || | |       |  ||||||||||||| ||| |||| ||| |  |||||  |||
Db       5054 ACCCCGTCTGTACTCAAAATGCAAAAATTAGCCAGGCGTGGTAGCAGGCACCTGTAATCC 5113

Qy       3716 CAGCTACTAGGG-GGCTGAGGCAGGAGAATCTTTGGAGCCCAGGAGGTCAAGGCTGCACT 3774
             |||||||| ||| |||||||||||||||||  | || ||||||||||  ||| |||| |
Db       5114 CAGCTACTTGGGAGGCTGAGGCAGGAGAATCGCTTGAACCCAGGAGGTGGAGGTTGCAGT 5173

Qy       3775 GAGCAGTGCTTGCGCCACTGCACTCCAGCCTGGGTGACAGGA-CCAGACCTTGCCTCAAA 3833
              ||| | | | | |||  |||||||||||||||| |||| || | ||||  || ||||  |
Db       5174 AAGCTGAGATCGTGCCGTTGCACTCCAGCCTGGGCGACAAGAGCAAGACTCTGTCTCAGA 5233

Qy       3834 AAAATAAGAAGAAAAATTAAAAATAAATGGAAACAACTACA 3874
              |||| || || ||||   | | | | |   | | ||| | |
Db       5234 AAAAAAAAAAAAAAAGAGAGAGAGAGAGAAAGAGAACAATA 5274


RESULT 6
US-09-966-880A-9/c
; Sequence 9, Application US/09966880A
; GENERAL INFORMATION:
;  APPLICANT: Honjo, Tasuku
;  APPLICANT:  Muramatsu, Masamichi
;  TITLE OF INVENTION: NOVEL CYTIDINE DEAMINASE
;  FILE REFERENCE: 06501-088001
;  CURRENT APPLICATION NUMBER: US/09/966,880A
;  CURRENT FILING DATE:  2001-09-28
;  PRIOR APPLICATION NUMBER: PCT/JP00/01918
;  PRIOR FILING DATE: 2000-03-28
;  PRIOR APPLICATION NUMBER: JP 11-371382
;  PRIOR FILING DATE: 1999-12-27
;  PRIOR APPLICATION NUMBER: JP 11-178999
;  PRIOR FILING DATE: 1999-06-24
;  PRIOR APPLICATION NUMBER: JP 11-87192
;  PRIOR FILING DATE: 1999-03-29
;  NUMBER OF SEQ ID NOS: 36
;  SOFTWARE: FastSEQ for Windows Version 4.0
; SEQ ID NO 9
;    LENGTH: 5514
;    TYPE: DNA
;    ORGANISM: Homo sapiens
;    FEATURE:
;    NAME/KEY: intron
;    LOCATION: (1)...(1031)
;    FEATURE:
;    NAME/KEY: exon
;    LOCATION: (1032)...(1118)
;    FEATURE:
;    NAME/KEY: intron
;    LOCATION: (1119)...(5514)
US-09-966-880A-9

  Query Match             2.0%;  Score 109.3;  DB 1;  Length 5514;
  Best Local Similarity   69.0%;  Pred. No. 4.4;
  Matches  176;  Conservative    0;  Mismatches   72;  Indels    7;  Gaps    2;

Qy       3621 TGAGCCCTGGAGTTCAAGACCAGCCTGAGCAACATGGCAAAACCCTGTTTCTATA----- 3675
             ||||  | ||||||  |||||||||||  |||||||  ||||||  |||||
Db       5511 TGAGGTCAGGAGTTTGAGACCAGCCTGGCCAACATGGTGAAACCCCCATCTCTACTAAAAA 5452

Qy       3676 -ACAAAAATTAGCCGGGCATGGTGGCATGTGCCTGTGGTCCCAGCTACTAGGG-GGCTGA 3733
              ||||| |||||||| | ||||||  | ||||||  |||||  ||||  ||| ||||||
Db       5451 TACAAACATTAGCCGAGTGTGGTGGTGGGCGCCTGTAATCCCATCTACCCGGGAGGCTGA 5392

Qy       3734 GGCAGGAGAATCTTTGGAGCCCAGGAGGTCAAGGCTGCACTGAGCAGTGCTTGCGCCACT 3793
              |||   ||  |   | || ||||||||||  ||| |||| |||||  || |  ||||
Db       5391 GGCGACAGCTTTGCTTGAACCCAGGAGGTGGAGGTTGCAGTGAGCTATGRTCATGCCATT 5332
```

```
Qy       3794 GCACTCCAGCCTGGGTGACAGGACCAGACCTTGCCTCAAAAAAATAAGAAGAAAAATTAA 3853
             ||||||||| |||| ||| ||||| | ||      ||||||| || || ||||| ||
Db       5331 CCACTCCAGCATGGGCAACAAGACCAAAACTCCATCTCAAAAAAAAAAAAAAAAAAAAAAA 5272

Qy       3854 AAATAAATGGAAACA 3868
              ||| ||| | || |
Db       5271 AAAGAAAGAGTAATA 5257


RESULT 7
US-09-966-880A-11
; Sequence 11, Application US/09966880A
; GENERAL INFORMATION:
;  APPLICANT: Honjo, Tasuku
;  APPLICANT:  Muramatsu, Masamichi
;  TITLE OF INVENTION: NOVEL CYTIDINE DEAMINASE
;  FILE REFERENCE: 06501-088001
;  CURRENT APPLICATION NUMBER: US/09/966,880A
;  CURRENT FILING DATE:  2001-09-28
;  PRIOR APPLICATION NUMBER: PCT/JP00/01918
;  PRIOR FILING DATE: 2000-03-28
;  PRIOR APPLICATION NUMBER: JP 11-371382
;  PRIOR FILING DATE: 1999-12-27
;  PRIOR APPLICATION NUMBER: JP 11-178999
;  PRIOR FILING DATE: 1999-06-24
;  PRIOR APPLICATION NUMBER: JP 11-87192
;  PRIOR FILING DATE: 1999-03-29
;  NUMBER OF SEQ ID NOS: 36
;  SOFTWARE: FastSEQ for Windows Version 4.0
; SEQ ID NO 11
;   LENGTH: 87
;   TYPE: DNA
;   ORGANISM: Homo sapiens
US-09-966-880A-11

  Query Match             1.6%;  Score 87;  DB 1;  Length 87;
  Best Local Similarity   100.0%;  Pred. No. 4;
  Matches   87;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy       1032 AGAGAACCATCATTAATTGAAGTGAGATTTTTCTGGCCTGAGACTTGCAGGGAGGCAAGA 1091
             ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db          1 AGAGAACCATCATTAATTGAAGTGAGATTTTTCTGGCCTGAGACTTGCAGGGAGGCAAGA 60

Qy       1092 AGACACTCTGGACACCACTATGGACAG 1118
             ||||||||||||||||||||||||||
Db         61 AGACACTCTGGACACCACTATGGACAG 87


RESULT 8
US-09-966-880A-12/c
; Sequence 12, Application US/09966880A
; GENERAL INFORMATION:
;  APPLICANT: Honjo, Tasuku
;  APPLICANT:  Muramatsu, Masamichi
;  TITLE OF INVENTION: NOVEL CYTIDINE DEAMINASE
;  FILE REFERENCE: 06501-088001
;  CURRENT APPLICATION NUMBER: US/09/966,880A
;  CURRENT FILING DATE:  2001-09-28
;  PRIOR APPLICATION NUMBER: PCT/JP00/01918
;  PRIOR FILING DATE: 2000-03-28
;  PRIOR APPLICATION NUMBER: JP 11-371382
;  PRIOR FILING DATE: 1999-12-27
;  PRIOR APPLICATION NUMBER: JP 11-178999
;  PRIOR FILING DATE: 1999-06-24
;  PRIOR APPLICATION NUMBER: JP 11-87192
;  PRIOR FILING DATE: 1999-03-29
;  NUMBER OF SEQ ID NOS: 36
;  SOFTWARE: FastSEQ for Windows Version 4.0
; SEQ ID NO 12
;   LENGTH: 148
;   TYPE: DNA
;   ORGANISM: Homo sapiens
US-09-966-880A-12

  Query Match             0.3%;  Score 18.3;  DB 1;  Length 148;
  Best Local Similarity   64.6%;  Pred. No. 55;
  Matches   42;  Conservative    0;  Mismatches   22;  Indels    1;  Gaps    1;

Qy       2900 AACCAAGGTGCATGTAAAAAGATGTAGATTCCTCTGCCTTTCTCATCTACACAGCCCAGG 2959
             |||||| || ||   |||| |||||||     ||   | |  ||| |||| ||| ||||
Db        134 AACCAAAGTCCAGTGAAAAGGATGTAGCACTGTCACGCCTCTTCA-CTACGTAGCACAGG 76

Qy       2960 AGGGT 2964
              |||
Db         75 TAGGT 71


RESULT 9
US-09-966-880A-13/c
; Sequence 13, Application US/09966880A
; GENERAL INFORMATION:
;  APPLICANT: Honjo, Tasuku
;  APPLICANT:  Muramatsu, Masamichi
;  TITLE OF INVENTION: NOVEL CYTIDINE DEAMINASE
;  FILE REFERENCE: 06501-088001
;  CURRENT APPLICATION NUMBER: US/09/966,880A
;  CURRENT FILING DATE:  2001-09-28
;  PRIOR APPLICATION NUMBER: PCT/JP00/01918
;  PRIOR FILING DATE: 2000-03-28
;  PRIOR APPLICATION NUMBER: JP 11-371382
;  PRIOR FILING DATE: 1999-12-27
;  PRIOR APPLICATION NUMBER: JP 11-178999
;  PRIOR FILING DATE: 1999-06-24
;  PRIOR APPLICATION NUMBER: JP 11-87192
;  PRIOR FILING DATE: 1999-03-29
;  NUMBER OF SEQ ID NOS: 36
;  SOFTWARE: FastSEQ for Windows Version 4.0
; SEQ ID NO 13
;   LENGTH: 271
;   TYPE: DNA
;   ORGANISM: Homo sapiens
US-09-966-880A-13

  Query Match             0.3%;  Score 17.6;  DB 1;  Length 271;
  Best Local Similarity   52.8%;  Pred. No. 60;
  Matches   38;  Conservative    0;  Mismatches   34;  Indels    0;  Gaps    0;

Qy        937 GGGGTACCTGGTGGGGGTGATGCTGTCAGGGGAGGAGCCCAAAAGGGCAAGCTCAAATTT 996
              ||||  || || || |     | || |  || || |||    | || | || ||  | |
Db        102 GGGGCTCCAGGAGGTGAACCAGGTGACGCGGTAGCAGCGGCCAGGGTCTAGGTCCCAGTC 43

Qy        997 GAATGTGAAGGG 1008
               |  || || |
Db         42 CGAGATGTAGCG 31


RESULT 10
US-09-966-880A-14
; Sequence 14, Application US/09966880A
; GENERAL INFORMATION:
;  APPLICANT: Honjo, Tasuku
;  APPLICANT:  Muramatsu, Masamichi
;  TITLE OF INVENTION: NOVEL CYTIDINE DEAMINASE
;  FILE REFERENCE: 06501-088001
;  CURRENT APPLICATION NUMBER: US/09/966,880A
;  CURRENT FILING DATE:  2001-09-28
;  PRIOR APPLICATION NUMBER: PCT/JP00/01918
;  PRIOR FILING DATE: 2000-03-28
;  PRIOR APPLICATION NUMBER: JP 11-371382
;  PRIOR FILING DATE: 1999-12-27
;  PRIOR APPLICATION NUMBER: JP 11-178999
;  PRIOR FILING DATE: 1999-06-24
;  PRIOR APPLICATION NUMBER: JP 11-87192
;  PRIOR FILING DATE: 1999-03-29
;  NUMBER OF SEQ ID NOS: 36
;  SOFTWARE: FastSEQ for Windows Version 4.0
```

```
; SEQ ID NO 14
;   LENGTH: 116
;   TYPE: DNA
;   ORGANISM: Homo sapiens
US-09-966-880A-14

  Query Match             0.3%;  Score 16.2;  DB 1;  Length 116;
  Best Local Similarity   52.2%;  Pred. No. 53;
  Matches   36;  Conservative    0;  Mismatches   33;  Indels    0;  Gaps    0;

Qy       4437 GAAGGACTGCAAAGAGGGAAGAAGCTCTGGTGGGGTGAGGGTGGTGATTCAGGTTCTGTA 4496
              |||   |  |||||      ||   ||||  ||   |  ||   |||||| |  | |
Db         30 GAAAACCACGAAAGAACTTTCAAAGCCTGGGAAGGGCTGCATGAAAATTCAGTTCGTCTC 89

Qy       4497 TCCTGACTG 4505
              ||| ||| |
Db         90 TCCAGACAG 98


RESULT 11
US-09-966-880A-13
; Sequence 13, Application US/09966880A
; GENERAL INFORMATION:
;  APPLICANT: Honjo, Tasuku
;  APPLICANT:  Muramatsu, Masamichi
;  TITLE OF INVENTION: NOVEL CYTIDINE DEAMINASE
;  FILE REFERENCE: 06501-088001
;  CURRENT APPLICATION NUMBER: US/09/966,880A
;  CURRENT FILING DATE:  2001-09-28
;  PRIOR APPLICATION NUMBER: PCT/JP00/01918
;  PRIOR FILING DATE: 2000-03-28
;  PRIOR APPLICATION NUMBER: JP 11-371382
;  PRIOR FILING DATE: 1999-12-27
;  PRIOR APPLICATION NUMBER: JP 11-178999
;  PRIOR FILING DATE: 1999-06-24
;  PRIOR APPLICATION NUMBER: JP 11-87192
;  PRIOR FILING DATE: 1999-03-29
;  NUMBER OF SEQ ID NOS: 36
;  SOFTWARE: FastSEQ for Windows Version 4.0
; SEQ ID NO 13
;   LENGTH: 271
;   TYPE: DNA
;   ORGANISM: Homo sapiens
US-09-966-880A-13

  Query Match             0.3%;  Score 16;  DB 1;  Length 271;
  Best Local Similarity   55.4%;  Pred. No. 62;
  Matches   31;  Conservative    0;  Mismatches   25;  Indels    0;  Gaps    0;

Qy       2023 CAGCCGAGGCTGGTCTCTAAGTCCTGGCCCAAGCGATCCTCCTGCCTGGGCCTCCT 2078
              || |   | ||||   |||  |||||||  || | |      |||||  | |||
Db         36 CATCTCGGACTGGGACCTAGACCCTGGCCGCTGCTACCGCGTCACCTGGTTCACCT 91


RESULT 12
US-09-966-880A-12
; Sequence 12, Application US/09966880A
; GENERAL INFORMATION:
;  APPLICANT: Honjo, Tasuku
;  APPLICANT:  Muramatsu, Masamichi
;  TITLE OF INVENTION: NOVEL CYTIDINE DEAMINASE
;  FILE REFERENCE: 06501-088001
;  CURRENT APPLICATION NUMBER: US/09/966,880A
;  CURRENT FILING DATE:  2001-09-28
;  PRIOR APPLICATION NUMBER: PCT/JP00/01918
;  PRIOR FILING DATE: 2000-03-28
;  PRIOR APPLICATION NUMBER: JP 11-371382
;  PRIOR FILING DATE: 1999-12-27
;  PRIOR APPLICATION NUMBER: JP 11-178999
;  PRIOR FILING DATE: 1999-06-24
;  PRIOR APPLICATION NUMBER: JP 11-87192
;  PRIOR FILING DATE: 1999-03-29
;  NUMBER OF SEQ ID NOS: 36
;  SOFTWARE: FastSEQ for Windows Version 4.0
; SEQ ID NO 12
;   LENGTH: 148
;   TYPE: DNA
;   ORGANISM: Homo sapiens
US-09-966-880A-12

  Query Match             0.3%;  Score 15.4;  DB 1;  Length 148;
  Best Local Similarity   76.0%;  Pred. No. 59;
  Matches   19;  Conservative    0;  Mismatches    6;  Indels    0;  Gaps    0;

Qy       4349 AGACCAGCCTGGGCAACACAGTGAA 4373
              |||||  |||| || ||  ||||||
Db         69 AGACCTACCTGTGCTACGTAGTGAA 93


RESULT 13
US-09-966-880A-14/c
; Sequence 14, Application US/09966880A
; GENERAL INFORMATION:
;  APPLICANT: Honjo, Tasuku
;  APPLICANT:  Muramatsu, Masamichi
;  TITLE OF INVENTION: NOVEL CYTIDINE DEAMINASE
;  FILE REFERENCE: 06501-088001
;  CURRENT APPLICATION NUMBER: US/09/966,880A
;  CURRENT FILING DATE:  2001-09-28
;  PRIOR APPLICATION NUMBER: PCT/JP00/01918
;  PRIOR FILING DATE: 2000-03-28
;  PRIOR APPLICATION NUMBER: JP 11-371382
;  PRIOR FILING DATE: 1999-12-27
;  PRIOR APPLICATION NUMBER: JP 11-178999
;  PRIOR FILING DATE: 1999-06-24
;  PRIOR APPLICATION NUMBER: JP 11-87192
;  PRIOR FILING DATE: 1999-03-29
;  NUMBER OF SEQ ID NOS: 36
;  SOFTWARE: FastSEQ for Windows Version 4.0
; SEQ ID NO 14
;   LENGTH: 116
;   TYPE: DNA
;   ORGANISM: Homo sapiens
US-09-966-880A-14

  Query Match             0.3%;  Score 14.8;  DB 1;  Length 116;
  Best Local Similarity   59.5%;  Pred. No. 55;
  Matches   25;  Conservative    0;  Mismatches   17;  Indels    0;  Gaps    0;

Qy        662 AAGCTATTTAAATGCTCTTTAAGGTATTTACATAAATATTAC 703
              | ||| |  || | || |     | | | |||| || |||| |
Db         57 AGGCTTTGAAAGTTCTTTCGTGGTTTTCTACAAAAGTATTCC 16


RESULT 14
US-09-966-880A-11/c
; Sequence 11, Application US/09966880A
; GENERAL INFORMATION:
;  APPLICANT: Honjo, Tasuku
;  APPLICANT:  Muramatsu, Masamichi
;  TITLE OF INVENTION: NOVEL CYTIDINE DEAMINASE
;  FILE REFERENCE: 06501-088001
;  CURRENT APPLICATION NUMBER: US/09/966,880A
;  CURRENT FILING DATE:  2001-09-28
;  PRIOR APPLICATION NUMBER: PCT/JP00/01918
;  PRIOR FILING DATE: 2000-03-28
;  PRIOR APPLICATION NUMBER: JP 11-371382
;  PRIOR FILING DATE: 1999-12-27
;  PRIOR APPLICATION NUMBER: JP 11-178999
;  PRIOR FILING DATE: 1999-06-24
;  PRIOR APPLICATION NUMBER: JP 11-87192
;  PRIOR FILING DATE: 1999-03-29
;  NUMBER OF SEQ ID NOS: 36
;  SOFTWARE: FastSEQ for Windows Version 4.0
; SEQ ID NO 11
;   LENGTH: 87
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;   TYPE: DNA
;   ORGANISM: Homo sapiens
US-09-966-880A-11

  Query Match             0.3%;  Score 14.4;  DB 1;  Length 87;
  Best Local Similarity   51.6%;  Pred. No. 49;
  Matches   33;  Conservative    0;  Mismatches   31;  Indels    0;  Gaps    0;

Qy        579 CTGTCTGTACTGAGGTTCAGAGAGACTGTGGGAATATGGGGGAATTAGAGGCTATCTGAG 638
              |||||  || ||  || ||||| | ||    | |    | | |   |||| |    |
Db         87 CTGTCCATAGTGGTGTCCAGAGTGTCTTCTTGCCTCCCTGCAAGTCTCAGGCCAGAAAAA 28

Qy        639 GCTC 642
              |||
Db         27 TCTC 24


Search completed: March 10, 2004, 13:40:45
Job time : 49.087 secs

                          GenCore version 5.1.6
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OM nucleic - nucleic search, using sw model

Run on:         March 10, 2004, 13:38:36 ; Search time 56.0535 Seconds
                                           (without alignments)
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Title:          US-09-966-880A-10
Perfect score:  6564
Sequence:       1 gggggcctgtaatcccagct.....cttccacaaggcggtcaaag 6564

Scoring table:  IDENTITY_NUC
                Gapop 10.0 , Gapext 0.5

Searched:       7 seqs, 14872 residues

Total number of hits satisfying chosen parameters:      14

Minimum DB seq length: 0
Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%
                 Maximum Match 100%
                 Listing first 45 summaries

Database :       US09966880A.seq:*

      Pred. No. is the number of results predicted by chance to have a
      score greater than or equal to the score of the result being printed,
      and is derived by analysis of the total score distribution.

                                SUMMARIES

                 %
Result           Query
   No.    Score  Match Length DB  ID                          Description
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     2     2172   33.1   2172  1  US-09-966-880A-15           Sequence 15, Appl
     3      271    4.1    271  1  US-09-966-880A-13           Sequence 13, Appl
 c   4   178.6    2.7   5514  1  US-09-966-880A-9            Sequence 9, Appli
     5   174.2    2.7   5514  1  US-09-966-880A-9            Sequence 9, Appli
     6      148    2.3    148  1  US-09-966-880A-12           Sequence 12, Appl
     7      116    1.8    116  1  US-09-966-880A-14           Sequence 14, Appl
 c   8    34.8    0.5   6564  1  US-09-966-880A-10           Sequence 10, Appl
 c   9    29.4    0.4   2172  1  US-09-966-880A-15           Sequence 15, Appl
 c  10    20.6    0.3    271  1  US-09-966-880A-13           Sequence 13, Appl
 c  11    17.4    0.3     87  1  US-09-966-880A-11           Sequence 11, Appl
 c  12      17    0.3    116  1  US-09-966-880A-14           Sequence 14, Appl
    13    15.8    0.2     87  1  US-09-966-880A-11           Sequence 11, Appl
 c  14    15.8    0.2    148  1  US-09-966-880A-12           Sequence 12, Appl
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ALIGNMENTS

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RESULT 1
US-09-966-880A-10
; Sequence 10, Application US/09966880A
; GENERAL INFORMATION:
;  APPLICANT: Honjo, Tasuku
;  APPLICANT:  Muramatsu, Masamichi
;  TITLE OF INVENTION: NOVEL CYTIDINE DEAMINASE
;  FILE REFERENCE: 06501-088001
;  CURRENT APPLICATION NUMBER: US/09/966,880A
;  CURRENT FILING DATE:  2001-09-28
;  PRIOR APPLICATION NUMBER: PCT/JP00/01918
;  PRIOR FILING DATE: 2000-03-28
;  PRIOR APPLICATION NUMBER: JP 11-371382
;  PRIOR FILING DATE: 1999-12-27
;  PRIOR APPLICATION NUMBER: JP 11-178999
;  PRIOR FILING DATE: 1999-06-24
;  PRIOR APPLICATION NUMBER: JP 11-87192
;  PRIOR FILING DATE: 1999-03-29
;  NUMBER OF SEQ ID NOS: 36
;  SOFTWARE: FastSEQ for Windows Version 4.0
; SEQ ID NO 10
;   LENGTH: 6564
;   TYPE: DNA
;   ORGANISM: Homo sapiens
US-09-966-880A-10

  Query Match             100.0%;  Score 6564;  DB 1;  Length 6564;
  Best Local Similarity   100.0%;  Pred. No. 1.2e-44;
  Matches 6564;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 GGGGGCCTGTAATCCCAGCTACTCAGGAGGCTGAGGCAGGAGGATCCGCGGAGCCTGGCA 60
              |||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db          1 GGGGGCCTGTAATCCCAGCTACTCAGGAGGCTGAGGCAGGAGGATCCGCGGAGCCTGGCA 60

Qy         61 GATCTGCCTGAGCCTGGGAGGTTGAGGCTACAGTAAGCCAAGATCATGCCAGTATACTTC 120
              |||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db         61 GATCTGCCTGAGCCTGGGAGGTTGAGGCTACAGTAAGCCAAGATCATGCCAGTATACTTC 120

Qy        121 AGCCTGGGCGACAAAGTGAGACCGTAACAAAAAAAAAAAAAATTTAAAAAAAGAAATTTAG 180
              |||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        121 AGCCTGGGCGACAAAGTGAGACCGTAACAAAAAAAAAAAAAATTTAAAAAAAGAAATTTAG 180

Qy        181 ATCAAGATCCAACTGTAAAAAGTGGCCTAAACACCACATTAAAGAGTTTGGAGTTTATTC 240
              |||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        181 ATCAAGATCCAACTGTAAAAAGTGGCCTAAACACCACATTAAAGAGTTTGGAGTTTATTC 240

Qy        241 TGCAGGCAGAAGAGAACCATCAGGGGGTCTTCAGCATGGGAATGGCATGGTGCACCTGGT 300
              |||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        241 TGCAGGCAGAAGAGAACCATCAGGGGGTCTTCAGCATGGGAATGGCATGGTGCACCTGGT 300

Qy        301 TTTTGTGAGATCATGGTGGTGACAGTGTGGGGAATGTTATTTTGGAGGGACTGGAGGCAG 360
              |||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        301 TTTTGTGAGATCATGGTGGTGACAGTGTGGGGAATGTTATTTTGGAGGGACTGGAGGCAG 360

Qy        361 ACAGACCGGTTAAAAGGCCAGCACAACAGATAAGGAGGAAGAAGATGAGGGCTTGGACCG 420
              |||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        361 ACAGACCGGTTAAAAGGCCAGCACAACAGATAAGGAGGAAGAAGATGAGGGCTTGGACCG 420

Qy        421 AAGCAGAGAAGAGCAAACAGGGAAGGTACAAATTCAAGAAATATTGGGGGGTTTGAATCA 480
              |||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        421 AAGCAGAGAAGAGCAAACAGGGAAGGTACAAATTCAAGAAATATTGGGGGGTTTGAATCA 480

Qy        481 ACACATTTAGATGATTAATTAAATATGAGGACTGAGGAATAAGAAATGAGTCAAGGATGG 540
              |||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        481 ACACATTTAGATGATTAATTAAATATGAGGACTGAGGAATAAGAAATGAGTCAAGGATGG 540

Qy        541 TTCCAGGCTGCTAGGCTGCTTACCTGAGGTGGCAAAGTCGGGAGGAGTGGCAGTTTAGGA 600
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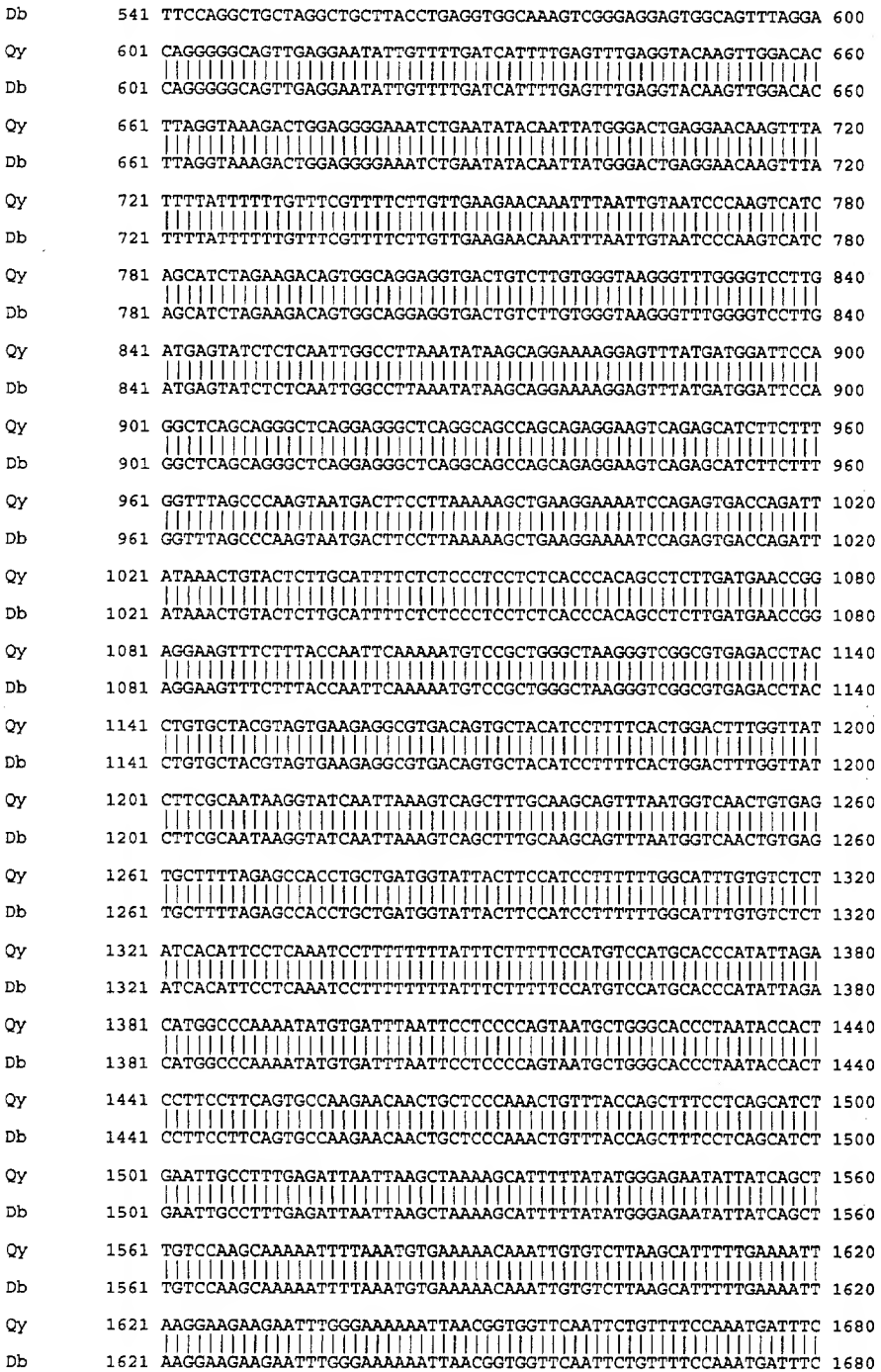
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Db 721 TTTTATTTTTTGTTTCGTTTTCTTGTTGAAGAACAAATTTAATTGTAATCCCAAGTCATC 780
Qy 781 AGCATCTAGAAGACAGTGGCAGGAGGTGACTGTCTTGTGGGTAAGGGTTTGGGGTCCTTG 840
Db 781 AGCATCTAGAAGACAGTGGCAGGAGGTGACTGTCTTGTGGGTAAGGGTTTGGGGTCCTTG 840
Qy 841 ATGAGTATCTCTCAATTGGCCTTAAATATAAGCAGGAAAAGGAGTTTATGATGGATTCCA 900
Db 841 ATGAGTATCTCTCAATTGGCCTTAAATATAAGCAGGAAAAGGAGTTTATGATGGATTCCA 900
Qy 901 GGCTCAGCAGGGCTCAGGAGGGCTCAGGCAGCCAGCAGAGGAAGTCAGAGCATCTTCTTT 960
Db 901 GGCTCAGCAGGGCTCAGGAGGGCTCAGGCAGCCAGCAGAGGAAGTCAGAGCATCTTCTTT 960
Qy 961 GGTTTAGCCCAAGTAATGACTTCCTTAAAAAGCTGAAGGAAAATCCAGAGTGACCAGATT 1020
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Qy 1021 ATAAACTGTACTCTTGCATTTTCTCTCCCTCCTCTCACCCACAGCCTCTTGATGAACCGG 1080
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Qy 1081 AGGAAGTTTCTTTACCAATTCAAAAATGTCCGCTGGGCTAAGGGTCGGCGTGAGACCTAC 1140
Db 1081 AGGAAGTTTCTTTACCAATTCAAAAATGTCCGCTGGGCTAAGGGTCGGCGTGAGACCTAC 1140
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Db 1141 CTGTGCTACGTAGTGAAGAGGCGTGACAGTGCTACATCCTTTTCACTGGACTTTGGTTAT 1200
Qy 1201 CTTCGCAATAAGGTATCAATTAAAGTCAGCTTTGCAAGCAGTTTAATGGTCAACTGTGAG 1260
Db 1201 CTTCGCAATAAGGTATCAATTAAAGTCAGCTTTGCAAGCAGTTTAATGGTCAACTGTGAG 1260
Qy 1261 TGCTTTTAGAGCCACCTGCTGATGGTATTACTTCCATCCTTTTTTGGCATTTGTGTCTCT 1320
Db 1261 TGCTTTTAGAGCCACCTGCTGATGGTATTACTTCCATCCTTTTTTGGCATTTGTGTCTCT 1320
Qy 1321 ATCACATTCCTCAAATCCTTTTTTTTTATTTCTTTTTCCATGTCCATGCACCCATATTAGA 1380
Db 1321 ATCACATTCCTCAAATCCTTTTTTTTTATTTCTTTTTCCATGTCCATGCACCCATATTAGA 1380
Qy 1381 CATGGCCCAAAATATGTGATTTAATTCCTCCCCAGTAATGCTGGGCACCCTAATACCACT 1440
Db 1381 CATGGCCCAAAATATGTGATTTAATTCCTCCCCAGTAATGCTGGGCACCCTAATACCACT 1440
Qy 1441 CCTTCCTTCAGTGCCAAGAACAACTGCTCCCAAACTGTTTACCAGCTTTCCTCAGCATCT 1500
Db 1441 CCTTCCTTCAGTGCCAAGAACAACTGCTCCCAAACTGTTTACCAGCTTTCCTCAGCATCT 1500
Qy 1501 GAATTGCCTTTGAGATTAATTAAGCTAAAAGCATTTTTATATGGGAGAATATTATCAGCT 1560
Db 1501 GAATTGCCTTTGAGATTAATTAAGCTAAAAGCATTTTTATATGGGAGAATATTATCAGCT 1560
Qy 1561 TGTCCAAGCAAAAATTTTAAATGTGAAAAACAAATTGTGTCTTAAGCATTTTTGAAAATT 1620
Db 1561 TGTCCAAGCAAAAATTTTAAATGTGAAAAACAAATTGTGTCTTAAGCATTTTTGAAAATT 1620
Qy 1621 AAGGAAGAAGAATTTGGGAAAAAATTAACGGTGGTTCAATTCTGTTTTCCAAATGATTTC 1680
Db 1621 AAGGAAGAAGAATTTGGGAAAAAATTAACGGTGGTTCAATTCTGTTTTCCAAATGATTTC 1680
Qy 1681 TTTTCCCTCCTACTCACATGGGTCGTAGGCCAGTGAATACATTCAACATGGTGATCCCCA 1740
Db 1681 TTTTCCCTCCTACTCACATGGGTCGTAGGCCAGTGAATACATTCAACATGGTGATCCCCA 1740
Qy 1741 GAAAACTCAGAGAAGCCTCGGCTGATGATTAATTAAATTGATCTTTCGGCTACCCGAGAG 1800
Db 1741 GAAAACTCAGAGAAGCCTCGGCTGATGATTAATTAAATTGATCTTTCGGCTACCCGAGAG 1800
Qy 1801 AATTACATTTCCAAGAGACTTCTTCACCAAAATCCAGATGGGTTTACATAAACTTCTGCC 1860
Db 1801 AATTACATTTCCAAGAGACTTCTTCACCAAAATCCAGATGGGTTTACATAAACTTCTGCC 1860
Qy 1861 CATGGGTATCTCCTCTCTCCTAACACGCTGTGACGTCTGGGCTTGGTGGAATCTCAGGGA 1920
Db 1861 CATGGGTATCTCCTCTCTCCTAACACGCTGTGACGTCTGGGCTTGGTGGAATCTCAGGGA 1920
Qy 1921 AGCATCCGTGGGGTGGAAGGTCATCGTCTGGCTCGTTGTTTGATGGTTATATTACCATGC 1980
Db 1921 AGCATCCGTGGGGTGGAAGGTCATCGTCTGGCTCGTTGTTTGATGGTTATATTACCATGC 1980
Qy 1981 AATTTTCTTTGCCTACATTTGTATTGAATACATCCCAATCTCCTTCCTATTCGGTGACAT 2040
Db 1981 AATTTTCTTTGCCTACATTTGTATTGAATACATCCCAATCTCCTTCCTATTCGGTGACAT 2040
Qy 2041 GACACATTCTATTTCAGAAGGCTTTGATTTTATCAAGCACTTTCATTTACTTCTCATGGC 2100
Db 2041 GACACATTCTATTTCAGAAGGCTTTGATTTTATCAAGCACTTTCATTTACTTCTCATGGC 2100
Qy 2101 AGTGCCTATTACTTCTCTTACAATACCCATCTGTCTGCTTTACCAAAATCTATTTCCCCT 2160
Db 2101 AGTGCCTATTACTTCTCTTACAATACCCATCTGTCTGCTTTACCAAAATCTATTTCCCCT 2160
Qy 2161 TTTCAGATCCTCCCAAATGGTCCTCATAAACTGTCCTGCCTCCACCTAGTGGTCCAGGTA 2220
Db 2161 TTTCAGATCCTCCCAAATGGTCCTCATAAACTGTCCTGCCTCCACCTAGTGGTCCAGGTA 2220
Qy 2221 TATTTCCACAATGTTACATCAACAGGCACTTCTAGCCATTTTCCTTCTCAAAAGGTGCAA 2280
Db 2221 TATTTCCACAATGTTACATCAACAGGCACTTCTAGCCATTTTCCTTCTCAAAAGGTGCAA 2280
Qy 2281 AAAGCAACTTCATAAACACAAATTAAATCTTCGGTGAGGTAGTGTGATGCTGCTTCCTCC 2340
Db 2281 AAAGCAACTTCATAAACACAAATTAAATCTTCGGTGAGGTAGTGTGATGCTGCTTCCTCC 2340
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Qy 2401 AGGACTAGTGCTGCCAAGGGTTCAGCTCTACCTACTGGTGTGCTCTTTTGAGCAAGTTGC 2460
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Db 2521 ACAATGACTAAGGCTACCAGAGCCGCAATAAAAGTCAGTGAATTTTAGCGTGGTCCTCTC 2580
Qy 2581 TGTCTCTCCAGAACGGCTGCCACGTGGAATTGCTCTTCCTCCGCTACATCTCGGACTGGG 2640
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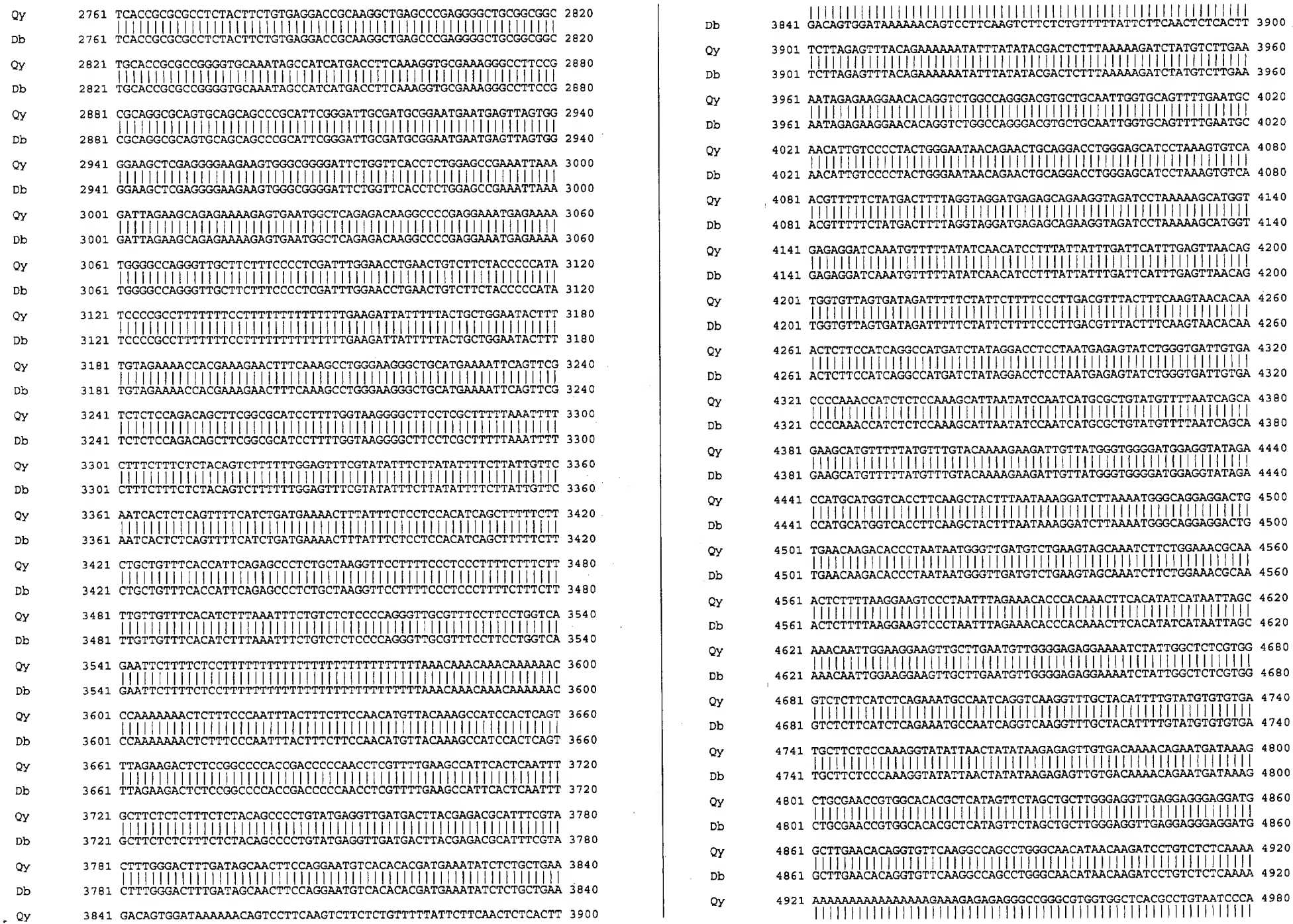
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Qy 3181 TGTAGAAAACCACGAAAGAACTTTCAAAGCCTGGGAAGGGCTGCATGAAAATTCAGTTCG 3240
Db 3181 TGTAGAAAACCACGAAAGAACTTTCAAAGCCTGGGAAGGGCTGCATGAAAATTCAGTTCG 3240
Qy 3241 TCTCTCCAGACAGCTTCGGCGCATCCTTTTGGTAAGGGGCTTCCTCGCTTTTTAAATTTT 3300
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Qy 3301 CTTTCTTTCTCTACAGTCTTTTTTGGAGTTTCGTATATTTCTTATATTTTCTTATTGTTC 3360
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Qy 3361 AATCACTCTCAGTTTTCATCTGATGAAAACTTTATTTCTCCTCCACATCAGCTTTTTCTT 3420
Db 3361 AATCACTCTCAGTTTTCATCTGATGAAAACTTTATTTCTCCTCCACATCAGCTTTTTCTT 3420
Qy 3421 CTGCTGTTTCACCATTCAGAGCCCTCTGCTAAGGTTCCTTTTCCCTCCCTTTTCTTTCTT 3480
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Qy 3481 TTGTTGTTTCACATCTTTAAATTTCTGTCTCTCCCCAGGGTTGCGTTTCCTTCCTGGTCA 3540
Db 3481 TTGTTGTTTCACATCTTTAAATTTCTGTCTCTCCCCAGGGTTGCGTTTCCTTCCTGGTCA 3540
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Db 3601 CCAAAAAAACTCTTTCCCAATTTACTTTCTTCCAACATGTTACAAAGCCATCCACTCAGT 3660
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Db 3841 GACAGTGGATAAAAAACAGTCCTTCAAGTCTTCTCTGTTTTTATTCTTCAACTCTCACTT 3900
Qy 3901 TCTTAGAGTTTACAGAAAAAATATTTATATACGACTCTTTAAAAAGATCTATGTCTTGAA 3960
Db 3901 TCTTAGAGTTTACAGAAAAAATATTTATATACGACTCTTTAAAAAGATCTATGTCTTGAA 3960
Qy 3961 AATAGAGAAGGAACACAGGTCTGGCCAGGGACGTGCTGCAATTGGTGCAGTTTTGAATGC 4020
Db 3961 AATAGAGAAGGAACACAGGTCTGGCCAGGGACGTGCTGCAATTGGTGCAGTTTTGAATGC 4020
Qy 4021 AACATTGTCCCCTACTGGGAATAACAGAACTGCAGGACCTGGGAGCATCCTAAAGTGTCA 4080
Db 4021 AACATTGTCCCCTACTGGGAATAACAGAACTGCAGGACCTGGGAGCATCCTAAAGTGTCA 4080
Qy 4081 ACGTTTTTCTATGACTTTTAGGTAGGATGAGAGCAGAAGGTAGATCCTAAAAAGCATGGT 4140
Db 4081 ACGTTTTTCTATGACTTTTAGGTAGGATGAGAGCAGAAGGTAGATCCTAAAAAGCATGGT 4140
Qy 4141 GAGAGGATCAAATGTTTTTATATCAACATCCTTTATTATTTGATTCATTTGAGTTAACAG 4200
Db 4141 GAGAGGATCAAATGTTTTTATATCAACATCCTTTATTATTTGATTCATTTGAGTTAACAG 4200
Qy 4201 TGGTGTTAGTGATAGATTTTTCTATTCTTTTCCCTTGACGTTTACTTTCAAGTAACACAA 4260
Db 4201 TGGTGTTAGTGATAGATTTTTCTATTCTTTTCCCTTGACGTTTACTTTCAAGTAACACAA 4260
Qy 4261 ACTCTTCCATCAGGCCATGATCTATAGGACCTCCTAATGAGAGTATCTGGGTGATTGTGA 4320
Db 4261 ACTCTTCCATCAGGCCATGATCTATAGGACCTCCTAATGAGAGTATCTGGGTGATTGTGA 4320
Qy 4321 CCCCAAACCATCTCTCCAAAGCATTAATATCCAATCATGCGCTGTATGTTTTAATCAGCA 4380
Db 4321 CCCCAAACCATCTCTCCAAAGCATTAATATCCAATCATGCGCTGTATGTTTTAATCAGCA 4380
Qy 4381 GAAGCATGTTTTTATGTTTGTACAAAAGAAGATTGTTATGGGTGGGGATGGAGGTATAGA 4440
Db 4381 GAAGCATGTTTTTATGTTTGTACAAAAGAAGATTGTTATGGGTGGGGATGGAGGTATAGA 4440
Qy 4441 CCATGCATGGTCACCTTCAAGCTACTTTAATAAAGGATCTTAAAATGGGCAGGAGGACTG 4500
Db 4441 CCATGCATGGTCACCTTCAAGCTACTTTAATAAAGGATCTTAAAATGGGCAGGAGGACTG 4500
Qy 4501 TGAACAAGACACCCTAATAATGGGTTGATGTCTGAAGTAGCAAATCTTCTGGAAACGCAA 4560
Db 4501 TGAACAAGACACCCTAATAATGGGTTGATGTCTGAAGTAGCAAATCTTCTGGAAACGCAA 4560
Qy 4561 ACTCTTTTAAGGAAGTCCCTAATTTAGAAACACCCACAAACTTCACATATCATAATTAGC 4620
Db 4561 ACTCTTTTAAGGAAGTCCCTAATTTAGAAACACCCACAAACTTCACATATCATAATTAGC 4620
Qy 4621 AAACAATTGGAAGGAAGTTGCTTGAATGTTGGGGAGAGGAAAATCTATTGGCTCTCGTGG 4680
Db 4621 AAACAATTGGAAGGAAGTTGCTTGAATGTTGGGGAGAGGAAAATCTATTGGCTCTCGTGG 4680
Qy 4681 GTCTCTTCATCTCAGAAATGCCAATCAGGTCAAGGTTTGCTACATTTTGTATGTGTGTGA 4740
Db 4681 GTCTCTTCATCTCAGAAATGCCAATCAGGTCAAGGTTTGCTACATTTTGTATGTGTGTGA 4740
Qy 4741 TGCTTCTCCCAAAGGTATATTAACTATATAAGAGAGTTGTGACAAAACAGAATGATAAAG 4800
Db 4741 TGCTTCTCCCAAAGGTATATTAACTATATAAGAGAGTTGTGACAAAACAGAATGATAAAG 4800
Qy 4801 CTGCGAACCGTGGCACACGCTCATAGTTCTAGCTGCTTGGGAGGTTGAGGAGGGAGGATG 4860
Db 4801 CTGCGAACCGTGGCACACGCTCATAGTTCTAGCTGCTTGGGAGGTTGAGGAGGGAGGATG 4860
Qy 4861 GCTTGAACACAGGTGTTCAAGGCCAGCCTGGGCAACATAACAAGATCCTGTCTCTCAAAA 4920
Db 4861 GCTTGAACACAGGTGTTCAAGGCCAGCCTGGGCAACATAACAAGATCCTGTCTCTCAAAA 4920
Qy 4921 AAAAAAAAAAAAAAAAGAAAGAGAGAGGGCCGGGCGTGGTGGCTCACGCCTGTAATCCCA 4980

```
Db       4921 AAAAAAAAAAAAAAAAAGAAAGAGAGAGGGCCGGGCGTGGTGGCTCACGCCTGTAATCCCA 4980

Qy       4981 GCACTTTGGGAGGCCGAGCCGGGCGGATCACCTGTGGTCAGGAGTTTGAGACCAGCCTGG 5040
             ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db       4981 GCACTTTGGGAGGCCGAGCCGGGCGGATCACCTGTGGTCAGGAGTTTGAGACCAGCCTGG 5040

Qy       5041 CCAACATGGCAAAACCCCGTCTGTACTCAAAATGCAAAAATTAGCCAGGCGTGGTAGCAG 5100
             ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db       5041 CCAACATGGCAAAACCCCGTCTGTACTCAAAATGCAAAAATTAGCCAGGCGTGGTAGCAG 5100

Qy       5101 GCACCTGTAATCCCAGCTACTTGGGAGGCTGAGGCAGGAGAATCGCTTGAACCCAGGAGG 5160
             ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db       5101 GCACCTGTAATCCCAGCTACTTGGGAGGCTGAGGCAGGAGAATCGCTTGAACCCAGGAGG 5160

Qy       5161 TGGAGGTTGCAGTAAGCTGAGATCGTGCCGTTGCACTCCAGCCTGGGCGACAAGAGCAAG 5220
             ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db       5161 TGGAGGTTGCAGTAAGCTGAGATCGTGCCGTTGCACTCCAGCCTGGGCGACAAGAGCAAG 5220

Qy       5221 ACTCTGTCTCAGAAAAAAAAAAAAAAAAGAGAGAGAGAGAGAAAGAGAACAATATTTGGG 5280
             ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db       5221 ACTCTGTCTCAGAAAAAAAAAAAAAAAAGAGAGAGAGAGAGAAAGAGAACAATATTTGGG 5280

Qy       5281 AGAGAAGGATGGGGAAGCATTGCAAGGAAATTGTGCTTTATCCAACAAAATGTAAGGAGC 5340
             ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db       5281 AGAGAAGGATGGGGAAGCATTGCAAGGAAATTGTGCTTTATCCAACAAAATGTAAGGAGC 5340

Qy       5341 CAATAAGGGATCCCTATTTGTCTCTTTTGGTGTCTATTTGTCCCTAACAACTGTCTTTGA 5400
             ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db       5341 CAATAAGGGATCCCTATTTGTCTCTTTTGGTGTCTATTTGTCCCTAACAACTGTCTTTGA 5400

Qy       5401 CAGTGAGAAAAATATTCAGAATAACCATATCCCTGTGCCGTTATTACCTAGCAACCCTTG 5460
             ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db       5401 CAGTGAGAAAAATATTCAGAATAACCATATCCCTGTGCCGTTATTACCTAGCAACCCTTG 5460

Qy       5461 CAATGAAGATGAGCAGATCCACAGGAAAACTTGAATGCACAACTGTCTTATTTTAATCTT 5520
             ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db       5461 CAATGAAGATGAGCAGATCCACAGGAAAACTTGAATGCACAACTGTCTTATTTTAATCTT 5520

Qy       5521 ATTGTACATAAGTTTGTAAAAGAGTTAAAAATTGTTACTTCATGTATTCATTTATATTTT 5580
             ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db       5521 ATTGTACATAAGTTTGTAAAAGAGTTAAAAATTGTTACTTCATGTATTCATTTATATTTT 5580

Qy       5581 ATATTATTTTGCGTCTAATGATTTTTTATTAACATGATTTCCTTTTCTGATATATTGAAA 5640
             ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db       5581 ATATTATTTTGCGTCTAATGATTTTTTATTAACATGATTTCCTTTTCTGATATATTGAAA 5640

Qy       5641 TGGAGTCTCAAAGCTTCATAAATTTATAACTTTAGAAATGATTCTAATAACAACGTATGT 5700
             ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db       5641 TGGAGTCTCAAAGCTTCATAAATTTATAACTTTAGAAATGATTCTAATAACAACGTATGT 5700

Qy       5701 AATTGTAACATTGCAGTAATGGTGCTACGAAGCCATTTCTCTTGATTTTTAGTAAACTTT 5760
             ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db       5701 AATTGTAACATTGCAGTAATGGTGCTACGAAGCCATTTCTCTTGATTTTTAGTAAACTTT 5760

Qy       5761 TATGACAGCAAATTTGCTTCTGGCTCACTTTCAATCAGTTAAATAAATGATAAATAATTT 5820
             ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db       5761 TATGACAGCAAATTTGCTTCTGGCTCACTTTCAATCAGTTAAATAAATGATAAATAATTT 5820

Qy       5821 TGGAAGCTGTGAAGATAAAATACCAAATAAAATAATATAAAAGTGATTTATATGAAGTTA 5880
             ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db       5821 TGGAAGCTGTGAAGATAAAATACCAAATAAAATAATATAAAAGTGATTTATATGAAGTTA 5880

Qy       5881 AAATAAAAAAATCAGTATGATGGAATAAACTTGAGAGTCCAGAAGTTATCCCATACATCTG 5940
             ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db       5881 AAATAAAAAAATCAGTATGATGGAATAAACTTGAGAGTCCAGAAGTTATCCCATACATCTG 5940

Qy       5941 TAATCAACTAATTTCTCACAAGGGTGTAAGGACCATTCAATGGAGAAAAAATGATCTTCT 6000
             ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db       5941 TAATCAACTAATTTCTCACAAGGGTGTAAGGACCATTCAATGGAGAAAAAATGATCTTCT 6000

Qy       6001 CAACAAATGGTGCTGAGCTAATTGGATATTACATGCAAAGGAATGAATTTGAGTCTCTAC 6060
             ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db       6001 CAACAAATGGTGCTGAGCTAATTGGATATTACATGCAAAGGAATGAATTTGAGTCTCTAC 6060

Qy       6061 TACACACCATATATAAAAATTAATTAAAAATTCATCAAATACCTAAATATTAGAGACTAA 6120
             ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db       6061 TACACACCATATATAAAAATTAATTAAAAATTCATCAAATACCTAAATATTAGAGACTAA 6120

Qy       6121 TTTATAAACCGTAGAGAGAAACATAGGTAAAAATGTTTATGGCTTTAGATTAGGCAACAG 6180
             ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db       6121 TTTATAAACCGTAGAGAGAAACATAGGTAAAAATGTTTATGGCTTTAGATTAGGCAACAG 6180

Qy       6181 CTTCTTAATTATGACATCAAAAGCACAAGCAACCAAAGACAAAAATAAATCAGTTGGACT 6240
             ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db       6181 CTTCTTAATTATGACATCAAAAGCACAAGCAACCAAAGACAAAAATAAATCAGTTGGACT 6240

Qy       6241 TCATCGAAATTAAAAATCTTTGTGCATCAAAGGACACTTAGTAAGAAAGTGAAAAGACAA 6300
             ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db       6241 TCATCGAAATTAAAAATCTTTGTGCATCAAAGGACACTTAGTAAGAAAGTGAAAAGACAA 6300

Qy       6301 CCCACAGAAGTGGGAGAAAACACTTGCAAATCATATATCTGATAAGGGTTGTGATATTAT 6360
             ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db       6301 CCCACAGAAGTGGGAGAAAACACTTGCAAATCATATATCTGATAAGGGTTGTGATATTAT 6360

Qy       6361 GATATATATATAGGTTTTTGTCCATAGTTCCTGGCTTATAAACCCCCTCACCCTTGTTAC 6420
             ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db       6361 GATATATATATAGGTTTTTGTCCATAGTTCCTGGCTTATAAACCCCCTCACCCTTGTTAC 6420

Qy       6421 AGTCATTTGTTATAAGGTTGGATGGTTTAGGCCTCAGAAGCAAAACTCTCTCTCTCACCT 6480
             ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db       6421 AGTCATTTGTTATAAGGTTGGATGGTTTAGGCCTCAGAAGCAAAACTCTCTCTCTCACCT 6480

Qy       6481 TCTCCAGCCCTCCTGTCTCTGGCACCTCATTCTTCCCTGAGGCCACATAGAAACTAGAAT 6540
             ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db       6481 TCTCCAGCCCTCCTGTCTCTGGCACCTCATTCTTCCCTGAGGCCACATAGAAACTAGAAT 6540

Qy       6541 CTCTCTTCCACAAGGCGGTCAAAG 6564
             |||||||||||||||||||||||||
Db       6541 CTCTCTTCCACAAGGCGGTCAAAG 6564
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RESULT 2
US-09-966-880A-15
; Sequence 15, Application US/09966880A
; GENERAL INFORMATION:
; APPLICANT: Honjo, Tasuku
; APPLICANT: Muramatsu, Masamichi
; TITLE OF INVENTION: NOVEL CYTIDINE DEAMINASE
; FILE REFERENCE: 06501-088001
; CURRENT APPLICATION NUMBER: US/09/966,880A
; CURRENT FILING DATE: 2001-09-28
; PRIOR APPLICATION NUMBER: PCT/JP00/01918
; PRIOR FILING DATE: 2000-03-28
; PRIOR APPLICATION NUMBER: JP 11-371382
; PRIOR FILING DATE: 1999-12-27
; PRIOR APPLICATION NUMBER: JP 11-178999
; PRIOR FILING DATE: 1999-06-24
; PRIOR APPLICATION NUMBER: JP 11-87192
; PRIOR FILING DATE: 1999-03-29
; NUMBER OF SEQ ID NOS: 36
; SOFTWARE: FastSEQ for Windows Version 4.0
; SEQ ID NO 15
; LENGTH: 2172
; TYPE: DNA
; ORGANISM: Homo sapiens
US-09-966-880A-15

Query Match 33.1%; Score 2172; DB 1; Length 2172;
Best Local Similarity 100.0%; Pred. No. 2.1e-14;
Matches 2172; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

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Qy       3741 CCCCTGTATGAGGTTGATGACTTACGAGACGCATTTCGTACTTTGGGACTTTGATAGCAA 3800
             ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db          1 CCCCTGTATGAGGTTGATGACTTACGAGACGCATTTCGTACTTTGGGACTTTGATAGCAA 60

Qy       3801 CTTCCAGGAATGTCACACACGATGAAATATCTCTGCTGAAGACAGTGGATAAAAAACAGT 3860
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Db        61 CTTCCAGGAATGTCACACACGATGAAATATCTCTGCTGAAGACAGTGGATAAAAAACAGT 120
Qy      3861 CCTTCAAGTCTTCTCTGTTTTTATTCTTCAACTCTCACTTTCTTAGAGTTTACAGAAAAA 3920
Db       121 CCTTCAAGTCTTCTCTGTTTTTATTCTTCAACTCTCACTTTCTTAGAGTTTACAGAAAAA 180
Qy      3921 ATATTTATATACGACTCTTTAAAAAGATCTATGTCTTGAAAATAGAGAAGGAACACAGGT 3980
Db       181 ATATTTATATACGACTCTTTAAAAAGATCTATGTCTTGAAAATAGAGAAGGAACACAGGT 240
Qy      3981 CTGGCCAGGGACGTGCTGCAATTGGTGCAGTTTTGAATGCAACATTGTCCCCTACTGGGA 4040
Db       241 CTGGCCAGGGACGTGCTGCAATTGGTGCAGTTTTGAATGCAACATTGTCCCCTACTGGGA 300
Qy      4041 ATAACAGAACTGCAGGACCTGGGAGCATCCTAAAGTGTCAACGTTTTTCTATGACTTTTA 4100
Db       301 ATAACAGAACTGCAGGACCTGGGAGCATCCTAAAGTGTCAACGTTTTTCTATGACTTTTA 360
Qy      4101 GGTAGGATGAGAGCAGAAGGTAGATCCTAAAAAGCATGGTGAGAGGATCAAATGTTTTTA 4160
Db       361 GGTAGGATGAGAGCAGAAGGTAGATCCTAAAAAGCATGGTGAGAGGATCAAATGTTTTTA 420
Qy      4161 TATCAACATCCTTTATTATTTGATTCATTTGAGTTAACAGTGGTGTTAGTGATAGATTTT 4220
Db       421 TATCAACATCCTTTATTATTTGATTCATTTGAGTTAACAGTGGTGTTAGTGATAGATTTT 480
Qy      4221 TCTATTCTTTTCCCTTGACGTTTACTTTCAAGTAACACAAACTCTTCCATCAGGCCATGA 4280
Db       481 TCTATTCTTTTCCCTTGACGTTTACTTTCAAGTAACACAAACTCTTCCATCAGGCCATGA 540
Qy      4281 TCTATAGGACCTCCTAATGAGAGTATCTGGGTGATTGTGACCCCAAACCATCTCTCCAAA 4340
Db       541 TCTATAGGACCTCCTAATGAGAGTATCTGGGTGATTGTGACCCCAAACCATCTCTCCAAA 600
Qy      4341 GCATTAATATCCAATCATGCGCTGTATGTTTTAATCAGCAGAAGCATGTTTTTATGTTTG 4400
Db       601 GCATTAATATCCAATCATGCGCTGTATGTTTTAATCAGCAGAAGCATGTTTTTATGTTTG 660
Qy      4401 TACAAAAGAAGATTGTTATGGGTGGGGATGGAGGTATAGACCATGCATGGTCACCTTCAA 4460
Db       661 TACAAAAGAAGATTGTTATGGGTGGGGATGGAGGTATAGACCATGCATGGTCACCTTCAA 720
Qy      4461 GCTACTTTAATAAAGGATCTTAAAATGGGCAGGAGGACTGTGAACAAGACACCCTAATAA 4520
Db       721 GCTACTTTAATAAAGGATCTTAAAATGGGCAGGAGGACTGTGAACAAGACACCCTAATAA 780
Qy      4521 TGGGTTGATGTCTGAAGTAGCAAATCTTCTGGAAACGCAAACTCTTTTAAGGAAGTCCCT 4580
Db       781 TGGGTTGATGTCTGAAGTAGCAAATCTTCTGGAAACGCAAACTCTTTTAAGGAAGTCCCT 840
Qy      4581 AATTTAGAAACACCCACAAACTTCACATATCATAATTAGCAAACAATTGGAAGGAAGTTG 4640
Db       841 AATTTAGAAACACCCACAAACTTCACATATCATAATTAGCAAACAATTGGAAGGAAGTTG 900
Qy      4641 CTTGAATGTTGGGGAGAGGAAAATCTATTGGCTCTCGTGGGTCTCTTCATCTCAGAAATG 4700
Db       901 CTTGAATGTTGGGGAGAGGAAAATCTATTGGCTCTCGTGGGTCTCTTCATCTCAGAAATG 960
Qy      4701 CCAATCAGGTCAAGGTTTGCTACATTTTGTATGTGTGTGATGCTTCTCCCAAAGGTATAT 4760
Db       961 CCAATCAGGTCAAGGTTTGCTACATTTTGTATGTGTGTGATGCTTCTCCCAAAGGTATAT 1020
Qy      4761 TAACTATATAAGAGAGTTGTGACAAAACAGAATGATAAAGCTGCGAACCGTGGCACACGC 4820
Db      1021 TAACTATATAAGAGAGTTGTGACAAAACAGAATGATAAAGCTGCGAACCGTGGCACACGC 1080
Qy      4821 TCATAGTTCTAGCTGCTTGGGAGGTTGAGGAGGGAGGATGGCTTGAACACAGGTGTTCAA 4880
Db      1081 TCATAGTTCTAGCTGCTTGGGAGGTTGAGGAGGGAGGATGGCTTGAACACAGGTGTTCAA 1140
Qy      4881 GGCCAGCCTGGGCAACATAACAAGATCCTGTCTCTCAAAAAAAAAAAAAAAAAAAAGAAA 4940
Db      1141 GGCCAGCCTGGGCAACATAACAAGATCCTGTCTCTCAAAAAAAAAAAAAAAAAAAAGAAA 1200
Qy      4941 GAGAGAGGGCCGGGCGTGGTGGCTCACGCCTGTAATCCCAGCACTTTGGGAGGCCGAGCC 5000
Db      1201 GAGAGAGGGCCGGGCGTGGTGGCTCACGCCTGTAATCCCAGCACTTTGGGAGGCCGAGCC 1260
Qy      5001 GGGCGGATCACCTGTGGTCAGGAGTTTGAGACCAGCCTGGCCAACATGGCAAAACCCCGT 5060
Db      1261 GGGCGGATCACCTGTGGTCAGGAGTTTGAGACCAGCCTGGCCAACATGGCAAAACCCCGT 1320
Qy      5061 CTGTACTCAAAATGCAAAAATTAGCCAGGCGTGGTAGCAGGCACCTGTAATCCCAGCTAC 5120
Db      1321 CTGTACTCAAAATGCAAAAATTAGCCAGGCGTGGTAGCAGGCACCTGTAATCCCAGCTAC 1380
Qy      5121 TTGGGAGGCTGAGGCAGGAGAATCGCTTGAACCCAGGAGGTGGAGGTTGCAGTAAGCTGA 5180
Db      1381 TTGGGAGGCTGAGGCAGGAGAATCGCTTGAACCCAGGAGGTGGAGGTTGCAGTAAGCTGA 1440
Qy      5181 GATCGTGCCGTTGCACTCCAGCCTGGGCGACAAGAGCAAGACTCTGTCTCAGAAAAAAAA 5240
Db      1441 GATCGTGCCGTTGCACTCCAGCCTGGGCGACAAGAGCAAGACTCTGTCTCAGAAAAAAAA 1500
Qy      5241 AAAAAAAAGAGAGAGAGAGAGAAAGAGAACAATATTTGGGAGAGAAGGATGGGGAAGCAT 5300
Db      1501 AAAAAAAAGAGAGAGAGAGAGAAAGAGAACAATATTTGGGAGAGAAGGATGGGGAAGCAT 1560
Qy      5301 TGCAAGGAAATTGTGCTTTATCCAACAAAATGTAAGGAGCCAATAAGGGATCCCTATTTG 5360
Db      1561 TGCAAGGAAATTGTGCTTTATCCAACAAAATGTAAGGAGCCAATAAGGGATCCCTATTTG 1620
Qy      5361 TCTCTTTTGGTGTCTATTTGTCCCTAACAACTGTCTTTGACAGTGAGAAAAATATTCAGA 5420
Db      1621 TCTCTTTTGGTGTCTATTTGTCCCTAACAACTGTCTTTGACAGTGAGAAAAATATTCAGA 1680
Qy      5421 ATAACCATATCCCTGTGCCGTTATTACCTAGCAACCCTTGCAATGAAGATGAGCAGATCC 5480
Db      1681 ATAACCATATCCCTGTGCCGTTATTACCTAGCAACCCTTGCAATGAAGATGAGCAGATCC 1740
Qy      5481 ACAGGAAAACTTGAATGCACAACTGTCTTATTTTAATCTTATTGTACATAAGTTTGTAAA 5540
Db      1741 ACAGGAAAACTTGAATGCACAACTGTCTTATTTTAATCTTATTGTACATAAGTTTGTAAA 1800
Qy      5541 AGAGTTAAAAATTGTTACTTCATGTATTCATTTATATTTTATATTATTTTGCGTCTAATG 5600
Db      1801 AGAGTTAAAAATTGTTACTTCATGTATTCATTTATATTTTATATTATTTTGCGTCTAATG 1860
Qy      5601 ATTTTTTATTAACATGATTTCCTTTTCTGATATATTGAAATGGAGTCTCAAAGCTTCATA 5660
Db      1861 ATTTTTTATTAACATGATTTCCTTTTCTGATATATTGAAATGGAGTCTCAAAGCTTCATA 1920
Qy      5661 AATTTATAACTTTAGAAATGATTCTAATAACAACGTATGTAATTGTAACATTGCAGTAAT 5720
Db      1921 AATTTATAACTTTAGAAATGATTCTAATAACAACGTATGTAATTGTAACATTGCAGTAAT 1980
Qy      5721 GGTGCTACGAAGCCATTTCTCTTGATTTTTAGTAAACTTTTATGACAGCAAATTTGCTTC 5780
Db      1981 GGTGCTACGAAGCCATTTCTCTTGATTTTTAGTAAACTTTTATGACAGCAAATTTGCTTC 2040
Qy      5781 TGGCTCACTTTCAATCAGTTAAATAAATGATAAATAATTTTGGAAGCTGTGAAGATAAAA 5840
Db      2041 TGGCTCACTTTCAATCAGTTAAATAAATGATAAATAATTTTGGAAGCTGTGAAGATAAAA 2100
Qy      5841 TACCAAATAAAATAATATAAAAGTGATTTATATGAAGTTAAAATAAAAAATCAGTATGAT 5900
Db      2101 TACCAAATAAAATAATATAAAAGTGATTTATATGAAGTTAAAATAAAAAATCAGTATGAT 2160
Qy      5901 GGAATAAACTTG 5912
Db      2161 GGAATAAACTTG 2172
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RESULT 3
US-09-966-880A-13

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; Sequence 13, Application US/09966880A
; GENERAL INFORMATION:
;  APPLICANT: Honjo, Tasuku
;  APPLICANT:  Muramatsu, Masamichi
;  TITLE OF INVENTION: NOVEL CYTIDINE DEAMINASE
;  FILE REFERENCE: 06501-088001
;  CURRENT APPLICATION NUMBER: US/09/966,880A
;  CURRENT FILING DATE:  2001-09-28
;  PRIOR APPLICATION NUMBER: PCT/JP00/01918
;  PRIOR FILING DATE: 2000-03-28
;  PRIOR APPLICATION NUMBER: JP 11-371382
;  PRIOR FILING DATE: 1999-12-27
;  PRIOR APPLICATION NUMBER: JP 11-178999
;  PRIOR FILING DATE: 1999-06-24
;  PRIOR APPLICATION NUMBER: JP 11-87192
;  PRIOR FILING DATE: 1999-03-29
;  NUMBER OF SEQ ID NOS: 36
;  SOFTWARE: FastSEQ for Windows Version 4.0
; SEQ ID NO 13
;    LENGTH: 271
;    TYPE: DNA
;    ORGANISM: Homo sapiens
US-09-966-880A-13

  Query Match             4.1%;  Score 271;  DB 1;  Length 271;
  Best Local Similarity   100.0%;  Pred. No. 1.3;
  Matches  271;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy       2592 AACGGCTGCCACGTGGAATTGCTCTTCCTCCGCTACATCTCGGACTGGGACCTAGACCCT 2651
             ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db          1 AACGGCTGCCACGTGGAATTGCTCTTCCTCCGCTACATCTCGGACTGGGACCTAGACCCT 60

Qy       2652 GGCCGCTGCTACCGCGTCACCTGGTTCACCTCCTGGAGCCCCTGCTACGACTGTGCCCGA 2711
             ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db         61 GGCCGCTGCTACCGCGTCACCTGGTTCACCTCCTGGAGCCCCTGCTACGACTGTGCCCGA 120

Qy       2712 CATGTGGCCGACTTTCTGCGAGGGAACCCCAACCTCAGTCTGAGGATCTTCACCGCGCGC 2771
             ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        121 CATGTGGCCGACTTTCTGCGAGGGAACCCCAACCTCAGTCTGAGGATCTTCACCGCGCGC 180

Qy       2772 CTCTACTTCTGTGAGGACCGCAAGGCTGAGCCCGAGGGGCTGCGGCGGCTGCACCGCGCC 2831
             ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        181 CTCTACTTCTGTGAGGACCGCAAGGCTGAGCCCGAGGGGCTGCGGCGGCTGCACCGCGCC 240

Qy       2832 GGGGTGCAAATAGCCATCATGACCTTCAAAG 2862
             |||||||||||||||||||||||||||||||
Db        241 GGGGTGCAAATAGCCATCATGACCTTCAAAG 271


RESULT 4
US-09-966-880A-9/c
; Sequence 9, Application US/09966880A
; GENERAL INFORMATION:
;  APPLICANT: Honjo, Tasuku
;  APPLICANT:  Muramatsu, Masamichi
;  TITLE OF INVENTION: NOVEL CYTIDINE DEAMINASE
;  FILE REFERENCE: 06501-088001
;  CURRENT APPLICATION NUMBER: US/09/966,880A
;  CURRENT FILING DATE:  2001-09-28
;  PRIOR APPLICATION NUMBER: PCT/JP00/01918
;  PRIOR FILING DATE: 2000-03-28
;  PRIOR APPLICATION NUMBER: JP 11-371382
;  PRIOR FILING DATE: 1999-12-27
;  PRIOR APPLICATION NUMBER: JP 11-178999
;  PRIOR FILING DATE: 1999-06-24
;  PRIOR APPLICATION NUMBER: JP 11-87192
;  PRIOR FILING DATE: 1999-03-29
;  NUMBER OF SEQ ID NOS: 36
;  SOFTWARE: FastSEQ for Windows Version 4.0
; SEQ ID NO 9
;    LENGTH: 5514
;    TYPE: DNA
;    ORGANISM: Homo sapiens
;    FEATURE:
;    NAME/KEY: intron
;    LOCATION: (1)...(1031)
;    FEATURE:
;    NAME/KEY: exon
;    LOCATION: (1032)...(1118)
;    FEATURE:
;    NAME/KEY: intron
;    LOCATION: (1119)...(5514)
US-09-966-880A-9

  Query Match             2.7%;  Score 178.6;  DB 1;  Length 5514;
  Best Local Similarity   83.1%;  Pred. No. 0.25;
  Matches  202;  Conservative    1;  Mismatches   40;  Indels    0;  Gaps    0;

Qy       5012 CTGTGGTCAGGAGTTTGAGACCAGCCTGGCCAACATGGCAAAACCCCGTCTGTACTCAAA 5071
             ||| |||||||||||||||||||||||||||||||||||||  ||||||| ||| |||| |||
Db       5512 CTGAGGTCAGGAGTTTGAGACCAGCCTGGCCAACATGGTGAAACCCCATCTCTACTAAAA 5453

Qy       5072 ATGCAAAAATTAGCCAGGCGTGGTAGCAGGCACCTGTAATCCCAGCTACTTGGGAGGCTG 5131
             || |||| |||||||  | ||||| |  ||| |||||||||||| |||| |||||||||
Db       5452 ATACAAACATTAGCCGAGTGTGGTGGTGGGCGCCTGTAATCCCATCTACCCGGGAGGCTG 5393

Qy       5132 AGGCAGGAGAATCGCTTGAACCCAGGAGGTGGAGGTTGCAGTAAGCTGAGATCGTGCCGT 5191
             ||||   ||  | ||||||||||||||||||||||||||||| ||||  |:|| |||| |
Db       5392 AGGCGACAGCTTTGCTTGAACCCAGGAGGTGGAGGTTGCAGTGAGCTATGRTCATGCCAT 5333

Qy       5192 TGCACTCCAGCCTGGGCGACAAGAGCAAGACTCTGTCTCAGAAAAAAAAAAAAAAAAAGAG 5251
             | ||||||||| ||||| |||||| ||| ||||  ||||| ||||||||||||||||| |
Db       5332 TCCACTCCAGCATGGGCAACAAGACCAAAACTCCATCTCAAAAAAAAAAAAAAAAAAAAA 5273

Qy       5252 AGA 5254
             |||
Db       5272 AAA 5270


RESULT 5
US-09-966-880A-9
; Sequence 9, Application US/09966880A
; GENERAL INFORMATION:
;  APPLICANT: Honjo, Tasuku
;  APPLICANT:  Muramatsu, Masamichi
;  TITLE OF INVENTION: NOVEL CYTIDINE DEAMINASE
;  FILE REFERENCE: 06501-088001
;  CURRENT APPLICATION NUMBER: US/09/966,880A
;  CURRENT FILING DATE:  2001-09-28
;  PRIOR APPLICATION NUMBER: PCT/JP00/01918
;  PRIOR FILING DATE: 2000-03-28
;  PRIOR APPLICATION NUMBER: JP 11-371382
;  PRIOR FILING DATE: 1999-12-27
;  PRIOR APPLICATION NUMBER: JP 11-178999
;  PRIOR FILING DATE: 1999-06-24
;  PRIOR APPLICATION NUMBER: JP 11-87192
;  PRIOR FILING DATE: 1999-03-29
;  NUMBER OF SEQ ID NOS: 36
;  SOFTWARE: FastSEQ for Windows Version 4.0
; SEQ ID NO 9
;    LENGTH: 5514
;    TYPE: DNA
;    ORGANISM: Homo sapiens
;    FEATURE:
;    NAME/KEY: intron
;    LOCATION: (1)...(1031)
;    FEATURE:
;    NAME/KEY: exon
;    LOCATION: (1032)...(1118)
;    FEATURE:
;    NAME/KEY: intron
;    LOCATION: (1119)...(5514)
US-09-966-880A-9

  Query Match             2.7%;  Score 174.2;  DB 1;  Length 5514;
  Best Local Similarity   74.8%;  Pred. No. 0.27;
```

```
  Matches  255;  Conservative    0;  Mismatches   78;  Indels    8;  Gaps    3;

Qy       4934 AAAGAAAGAGAGAGGGCCGGGCGTGGTGGCTCACGCCTGTAATCCCAGCACTTTGGGAGG 4993
             |||| | | |||  ||| || ||||||||||||||||||||||||||||||||| |||||||
Db       3542 AAAGTGAAACAGACAGCCAGGTGTGGTGGCTCACGCCTGTAATCCCAGCACTCTGGGAGG 3601

Qy       4994 CCGAGCCGGGCGGATCACCTGTGGTCAGGAGTTTGAGACCAGCCTGGCCAACATGGCAAA 5053
             | |||  ||| ||||| | || |  | ||||||  ||||||||||  ||||||||||
Db       3602 CTGAGGTGGGTGGATCGCTTGAGCCCTGGAGTTCAAGACCAGCCTGAGCAACATGGCAAA 3661

Qy       5054 ACCCCGTCTGTACTCAAAATGCAAAAATTAGCCAGGCGTGGTAGCAGGCACCTGTAATCC 5113
             |||| || | |       |  ||||||||||| ||| |||| ||| |  |||||  |||
Db       3662 ACCCTGTTTCT------ATAACAAAAATTAGCCGGGCATGGTGGCATGTGCCTGTGGTCC 3715

Qy       5114 CAGCTACTTGGGAGGCTGAGGCAGGAGAATCGCTTGAACCCAGGAGGTGGAGGTTGCAGT 5173
             |||||||| ||| ||||||||||||||||  | || ||||||||||  ||| |||| |
Db       3716 CAGCTACTAGGG-GGCTGAGGCAGGAGAATCTTTGGAGCCCAGGAGGTCAAGGCTGCACT 3774

Qy       5174 AAGCTGAGATCGTGCCGTTGCACTCCAGCCTGGGCGACAAGAGCAAGACTCTGTCTCAGA 5233
              ||| | | | | |||  ||||||||||||||| |||| || | ||||  || |||| |
Db       3775 GAGCAGTGCTTGCGCCACTGCACTCCAGCCTGGGTGACAGGA-CCAGACCTTGCCTCAAA 3833

Qy       5234 AAAAAAAAAAAAAAAAGAGAGAGAGAGAGAAAGAGAACAATA 5274
             |||| || || ||||  | | | | |  | | ||| | |
Db       3834 AAAATAAGAAGAAAAATTAAAAATAAATGGAAACAACTACA 3874


RESULT 6
US-09-966-880A-12
; Sequence 12, Application US/09966880A
; GENERAL INFORMATION:
;  APPLICANT: Honjo, Tasuku
;  APPLICANT:  Muramatsu, Masamichi
;  TITLE OF INVENTION: NOVEL CYTIDINE DEAMINASE
;  FILE REFERENCE: 06501-088001
;  CURRENT APPLICATION NUMBER: US/09/966,880A
;  CURRENT FILING DATE:  2001-09-28
;  PRIOR APPLICATION NUMBER: PCT/JP00/01918
;  PRIOR FILING DATE: 2000-03-28
;  PRIOR APPLICATION NUMBER: JP 11-371382
;  PRIOR FILING DATE: 1999-12-27
;  PRIOR APPLICATION NUMBER: JP 11-178999
;  PRIOR FILING DATE: 1999-06-24
;  PRIOR APPLICATION NUMBER: JP 11-87192
;  PRIOR FILING DATE: 1999-03-29
;  NUMBER OF SEQ ID NOS: 36
;  SOFTWARE: FastSEQ for Windows Version 4.0
; SEQ ID NO 12
;   LENGTH: 148
;   TYPE: DNA
;   ORGANISM: Homo sapiens
US-09-966-880A-12

  Query Match             2.3%;  Score 148;  DB 1;  Length 148;
  Best Local Similarity   100.0%;  Pred. No. 15;
  Matches  148;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy       1065 CCTCTTGATGAACCGGAGGAAGTTTCTTTACCAATTCAAAAATGTCCGCTGGGCTAAGGG 1124
             ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db          1 CCTCTTGATGAACCGGAGGAAGTTTCTTTACCAATTCAAAAATGTCCGCTGGGCTAAGGG 60

Qy       1125 TCGGCGTGAGACCTACCTGTGCTACGTAGTGAAGAGGCGTGACAGTGCTACATCCTTTTC 1184
             ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db         61 TCGGCGTGAGACCTACCTGTGCTACGTAGTGAAGAGGCGTGACAGTGCTACATCCTTTTC 120

Qy       1185 ACTGGACTTTGGTTATCTTCGCAATAAG 1212
             ||||||||||||||||||||||||||||
Db        121 ACTGGACTTTGGTTATCTTCGCAATAAG 148


RESULT 7
US-09-966-880A-14
; Sequence 14, Application US/09966880A
; GENERAL INFORMATION:
;  APPLICANT: Honjo, Tasuku
;  APPLICANT:  Muramatsu, Masamichi
;  TITLE OF INVENTION: NOVEL CYTIDINE DEAMINASE
;  FILE REFERENCE: 06501-088001
;  CURRENT APPLICATION NUMBER: US/09/966,880A
;  CURRENT FILING DATE:  2001-09-28
;  PRIOR APPLICATION NUMBER: PCT/JP00/01918
;  PRIOR FILING DATE: 2000-03-28
;  PRIOR APPLICATION NUMBER: JP 11-371382
;  PRIOR FILING DATE: 1999-12-27
;  PRIOR APPLICATION NUMBER: JP 11-178999
;  PRIOR FILING DATE: 1999-06-24
;  PRIOR APPLICATION NUMBER: JP 11-87192
;  PRIOR FILING DATE: 1999-03-29
;  NUMBER OF SEQ ID NOS: 36
;  SOFTWARE: FastSEQ for Windows Version 4.0
; SEQ ID NO 14
;   LENGTH: 116
;   TYPE: DNA
;   ORGANISM: Homo sapiens
US-09-966-880A-14

  Query Match             1.8%;  Score 116;  DB 1;  Length 116;
  Best Local Similarity   100.0%;  Pred. No. 30;
  Matches  116;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy       3156 ATTATTTTTACTGCTGGAATACTTTTGTAGAAAACCACGAAAGAACTTTCAAAGCCTGGG 3215
             ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db          1 ATTATTTTTACTGCTGGAATACTTTTGTAGAAAACCACGAAAGAACTTTCAAAGCCTGGG 60

Qy       3216 AAGGGCTGCATGAAAATTCAGTTCGTCTCTCCAGACAGCTTCGGCGCATCCTTTTG 3271
             |||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db         61 AAGGGCTGCATGAAAATTCAGTTCGTCTCTCCAGACAGCTTCGGCGCATCCTTTTG 116


RESULT 8
US-09-966-880A-10/c
; Sequence 10, Application US/09966880A
; GENERAL INFORMATION:
;  APPLICANT: Honjo, Tasuku
;  APPLICANT:  Muramatsu, Masamichi
;  TITLE OF INVENTION: NOVEL CYTIDINE DEAMINASE
;  FILE REFERENCE: 06501-088001
;  CURRENT APPLICATION NUMBER: US/09/966,880A
;  CURRENT FILING DATE:  2001-09-28
;  PRIOR APPLICATION NUMBER: PCT/JP00/01918
;  PRIOR FILING DATE: 2000-03-28
;  PRIOR APPLICATION NUMBER: JP 11-371382
;  PRIOR FILING DATE: 1999-12-27
;  PRIOR APPLICATION NUMBER: JP 11-178999
;  PRIOR FILING DATE: 1999-06-24
;  PRIOR APPLICATION NUMBER: JP 11-87192
;  PRIOR FILING DATE: 1999-03-29
;  NUMBER OF SEQ ID NOS: 36
;  SOFTWARE: FastSEQ for Windows Version 4.0
; SEQ ID NO 10
;   LENGTH: 6564
;   TYPE: DNA
;   ORGANISM: Homo sapiens
US-09-966-880A-10

  Query Match             0.5%;  Score 34.8;  DB 1;  Length 6564;
  Best Local Similarity   77.8%;  Pred. No. 1.5;
  Matches   42;  Conservative    0;  Mismatches   12;  Indels    0;  Gaps    0;

Qy       3555 TTTTTTTTTTTTTTTTTTTTTTTTTTAAACAAACAAACAAAAAACCCAAAAAA 3608
             ||||||   |||||| ||| ||| |||||| ||| ||| ||||||  ||||||
Db       3608 TTTTTTGGGTTTTTGTTTGTTTGTTTAAAAAAAAAAAAAAAAAAAAAAAAAA 3555


RESULT 9
US-09-966-880A-15/c
```

```
; Sequence 15, Application US/09966880A
; GENERAL INFORMATION:
;  APPLICANT: Honjo, Tasuku
;  APPLICANT:  Muramatsu, Masamichi
;  TITLE OF INVENTION: NOVEL CYTIDINE DEAMINASE
;  FILE REFERENCE: 06501-088001
;  CURRENT APPLICATION NUMBER: US/09/966,880A
;  CURRENT FILING DATE:  2001-09-28
;  PRIOR APPLICATION NUMBER: PCT/JP00/01918
;  PRIOR FILING DATE: 2000-03-28
;  PRIOR APPLICATION NUMBER: JP 11-371382
;  PRIOR FILING DATE: 1999-12-27
;  PRIOR APPLICATION NUMBER: JP 11-178999
;  PRIOR FILING DATE: 1999-06-24
;  PRIOR APPLICATION NUMBER: JP 11-87192
;  PRIOR FILING DATE: 1999-03-29
;  NUMBER OF SEQ ID NOS: 36
;  SOFTWARE: FastSEQ for Windows Version 4.0
; SEQ ID NO 15
;   LENGTH: 2172
;   TYPE: DNA
;   ORGANISM: Homo sapiens
US-09-966-880A-15

  Query Match             0.4%;  Score 29.4;  DB 1;  Length 2172;
  Best Local Similarity   56.8%;  Pred. No. 4.9;
  Matches   54;  Conservative    0;  Mismatches   41;  Indels    0;  Gaps    0;

Qy       3395 TTTCTCCTCCACATCAGCTTTTTCTTCTGCTGTTTCACCATTCAGAGCCCTCTGCTAAGG 3454
             ||| |     | | ||   ||| |||    || ||| |||| |   | | |   ||  |
Db       1589 TTTGTTGGATAAAGCACAATTTCCTTGCAATGCTTCCCCATCCTTCTCTCCCAAATATTG 1530

Qy       3455 TTCCTTTTCCCTCCCTTTTCTTTCTTTTGTTGTTT 3489
              |||  |||| ||| || |   || |||| || |||
Db       1529 TTCTCTTTCTCTCTCTCTCTTTTTTTTTTTTTT 1495


RESULT 10
US-09-966-880A-13/c
; Sequence 13, Application US/09966880A
; GENERAL INFORMATION:
;  APPLICANT: Honjo, Tasuku
;  APPLICANT:  Muramatsu, Masamichi
;  TITLE OF INVENTION: NOVEL CYTIDINE DEAMINASE
;  FILE REFERENCE: 06501-088001
;  CURRENT APPLICATION NUMBER: US/09/966,880A
;  CURRENT FILING DATE:  2001-09-28
;  PRIOR APPLICATION NUMBER: PCT/JP00/01918
;  PRIOR FILING DATE: 2000-03-28
;  PRIOR APPLICATION NUMBER: JP 11-371382
;  PRIOR FILING DATE: 1999-12-27
;  PRIOR APPLICATION NUMBER: JP 11-178999
;  PRIOR FILING DATE: 1999-06-24
;  PRIOR APPLICATION NUMBER: JP 11-87192
;  PRIOR FILING DATE: 1999-03-29
;  NUMBER OF SEQ ID NOS: 36
;  SOFTWARE: FastSEQ for Windows Version 4.0
; SEQ ID NO 13
;   LENGTH: 271
;   TYPE: DNA
;   ORGANISM: Homo sapiens
US-09-966-880A-13

  Query Match             0.3%;  Score 20.6;  DB 1;  Length 271;
  Best Local Similarity   51.6%;  Pred. No. 43;
  Matches   47;  Conservative    0;  Mismatches   44;  Indels    0;  Gaps    0;

Qy       2782 GTGAGGACCGCAAGGCTGAGCCCGAGGGGCTGCGGCGGCTGCACCGCGCCGGGGTGCAAA 2841
              || | ||  || |     | |||| | | ||| || || ||| | |  |||| |
Db        263 GTCATGATGGCTATTTGCACCCCGGCGCGGTGCAGCCGCCGCAGCCCCTCGGGCTCAGCC 204

Qy       2842 TAGCCATCATGACCTTCAAAGGTGCGAAAGG 2872
              | ||  || | ||      ||  |||   ||
Db        203 TTGCGGTCCTCACAGAAGTAGAGGCGCGCGG 173


RESULT 11
US-09-966-880A-11/c
; Sequence 11, Application US/09966880A
; GENERAL INFORMATION:
;  APPLICANT: Honjo, Tasuku
;  APPLICANT:  Muramatsu, Masamichi
;  TITLE OF INVENTION: NOVEL CYTIDINE DEAMINASE
;  FILE REFERENCE: 06501-088001
;  CURRENT APPLICATION NUMBER: US/09/966,880A
;  CURRENT FILING DATE:  2001-09-28
;  PRIOR APPLICATION NUMBER: PCT/JP00/01918
;  PRIOR FILING DATE: 2000-03-28
;  PRIOR APPLICATION NUMBER: JP 11-371382
;  PRIOR FILING DATE: 1999-12-27
;  PRIOR APPLICATION NUMBER: JP 11-178999
;  PRIOR FILING DATE: 1999-06-24
;  PRIOR APPLICATION NUMBER: JP 11-87192
;  PRIOR FILING DATE: 1999-03-29
;  NUMBER OF SEQ ID NOS: 36
;  SOFTWARE: FastSEQ for Windows Version 4.0
; SEQ ID NO 11
;   LENGTH: 87
;   TYPE: DNA
;   ORGANISM: Homo sapiens
US-09-966-880A-11

  Query Match             0.3%;  Score 17.4;  DB 1;  Length 87;
  Best Local Similarity   62.8%;  Pred. No. 1.4e+02;
  Matches   27;  Conservative    0;  Mismatches   16;  Indels    0;  Gaps    0;

Qy        501 AAATATGAGGACTGAGGAATAAGAAATGAGTCAAGGATGGTTC 543
              || | | ||| | ||  |||    |  | | | || ||||||||
Db         46 AAGTCTCAGGCCAGAAAAATCTCACTTCAATTAATGATGGTTC 4


RESULT 12
US-09-966-880A-14/c
; Sequence 14, Application US/09966880A
; GENERAL INFORMATION:
;  APPLICANT: Honjo, Tasuku
;  APPLICANT:  Muramatsu, Masamichi
;  TITLE OF INVENTION: NOVEL CYTIDINE DEAMINASE
;  FILE REFERENCE: 06501-088001
;  CURRENT APPLICATION NUMBER: US/09/966,880A
;  CURRENT FILING DATE:  2001-09-28
;  PRIOR APPLICATION NUMBER: PCT/JP00/01918
;  PRIOR FILING DATE: 2000-03-28
;  PRIOR APPLICATION NUMBER: JP 11-371382
;  PRIOR FILING DATE: 1999-12-27
;  PRIOR APPLICATION NUMBER: JP 11-178999
;  PRIOR FILING DATE: 1999-06-24
;  PRIOR APPLICATION NUMBER: JP 11-87192
;  PRIOR FILING DATE: 1999-03-29
;  NUMBER OF SEQ ID NOS: 36
;  SOFTWARE: FastSEQ for Windows Version 4.0
; SEQ ID NO 14
;   LENGTH: 116
;   TYPE: DNA
;   ORGANISM: Homo sapiens
US-09-966-880A-14

  Query Match             0.3%;  Score 17;  DB 1;  Length 116;
  Best Local Similarity   52.1%;  Pred. No. 1e+02;
  Matches   38;  Conservative    0;  Mismatches   35;  Indels    0;  Gaps    0;

Qy       3106 TCTTCTACCCCCATATCCCCGCCTTTTTTCCTTTTTTTTTTTTTTGAAGATTATTTTTA 3165
              | |||   |  |   |||| | ||||       | |||  |  ||||  | |  | | ||
Db         76 TTTTCATGCAGCCCTTCCCAGGCTTTGAAAGTTCTTTCGTGGTTTTCTACAAAAGTATTC 17

Qy       3166 CTGCTGGAATACT 3178
```

```
                  | || | || | |
Db          16 CAGCAGTAAAAAT 4


RESULT 13
US-09-966-880A-11
; Sequence 11, Application US/09966880A
; GENERAL INFORMATION:
;  APPLICANT: Honjo, Tasuku
;  APPLICANT:  Muramatsu, Masamichi
;  TITLE OF INVENTION: NOVEL CYTIDINE DEAMINASE
;  FILE REFERENCE: 06501-088001
;  CURRENT APPLICATION NUMBER: US/09/966,880A
;  CURRENT FILING DATE:  2001-09-28
;  PRIOR APPLICATION NUMBER: PCT/JP00/01918
;  PRIOR FILING DATE: 2000-03-28
;  PRIOR APPLICATION NUMBER: JP 11-371382
;  PRIOR FILING DATE: 1999-12-27
;  PRIOR APPLICATION NUMBER: JP 11-178999
;  PRIOR FILING DATE: 1999-06-24
;  PRIOR APPLICATION NUMBER: JP 11-87192
;  PRIOR FILING DATE: 1999-03-29
;  NUMBER OF SEQ ID NOS: 36
;  SOFTWARE: FastSEQ for Windows Version 4.0
; SEQ ID NO 11
;   LENGTH: 87
;   TYPE: DNA
;   ORGANISM: Homo sapiens
US-09-966-880A-11

  Query Match             0.2%;  Score 15.8;  DB 1;  Length 87;
  Best Local Similarity   65.7%;  Pred. No. 1.4e+02;
  Matches   23;  Conservative    0;  Mismatches   12;  Indels    0;  Gaps    0;

Qy       1765 ATGATTAATTAAATTGATCTTTCGGCTACCCGAGA 1799
                || |||||||  || |||  |||      || ||||
Db          9 ATCATTAATTGAAGTGAGATTTTTCTGGCCTGAGA 43


RESULT 14
US-09-966-880A-12/c
; Sequence 12, Application US/09966880A
; GENERAL INFORMATION:
;  APPLICANT: Honjo, Tasuku
;  APPLICANT:  Muramatsu, Masamichi
;  TITLE OF INVENTION: NOVEL CYTIDINE DEAMINASE
;  FILE REFERENCE: 06501-088001
;  CURRENT APPLICATION NUMBER: US/09/966,880A
;  CURRENT FILING DATE:  2001-09-28
;  PRIOR APPLICATION NUMBER: PCT/JP00/01918
;  PRIOR FILING DATE: 2000-03-28
;  PRIOR APPLICATION NUMBER: JP 11-371382
;  PRIOR FILING DATE: 1999-12-27
;  PRIOR APPLICATION NUMBER: JP 11-178999
;  PRIOR FILING DATE: 1999-06-24
;  PRIOR APPLICATION NUMBER: JP 11-87192
;  PRIOR FILING DATE: 1999-03-29
;  NUMBER OF SEQ ID NOS: 36
;  SOFTWARE: FastSEQ for Windows Version 4.0
; SEQ ID NO 12
;   LENGTH: 148
;   TYPE: DNA
;   ORGANISM: Homo sapiens
US-09-966-880A-12

  Query Match             0.2%;  Score 15.8;  DB 1;  Length 148;
  Best Local Similarity   60.5%;  Pred. No. 83;
  Matches   26;  Conservative    0;  Mismatches   17;  Indels    0;  Gaps    0;

Qy       1559 CTTGTCCAAGCAAAAATTTTAAATGTGAAAAACAAATTGTGTC 1601
                |||  || |||  | |||||  |  ||  ||| ||| |   ||
Db         58 CTTAGCCCAGCGGACATTTTTGAATTGGTAAAGAAACTTCCTC 16


Search completed: March 10, 2004, 13:40:47
Job time : 58.0535 secs

                                GenCore version 5.1.6
                  Copyright (c) 1993 - 2004  Compugen Ltd.


OM nucleic - nucleic search, using sw model

Run on:         March 10, 2004, 13:38:36 ; Search time 0.74294 Seconds
                                           (without alignments)
                                           3.483 Million cell updates/sec

Title:          US-09-966-880A-11
Perfect score:  87
Sequence:       1 agagaaccatcattaattga.....ctggacaccactatggacag 87

Scoring table:  IDENTITY_NUC
                Gapop 10.0 , Gapext 0.5

Searched:       7 seqs, 14872 residues

Total number of hits satisfying chosen parameters:      14

Minimum DB seq length: 0
Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%
                 Maximum Match 100%
                 Listing first 45 summaries

Database :      US09966880A.seq:*

     Pred. No. is the number of results predicted by chance to have a
     score greater than or equal to the score of the result being printed,
     and is derived by analysis of the total score distribution.

                                SUMMARIES

                  %
Result            Query
  No.    Score  Match Length DB  ID                          Description
 ------------------------------------------------------------------------------
    1     87  100.0     87  1  US-09-966-880A-11           Sequence 11, Appl
    2     87  100.0   5514  1  US-09-966-880A-9            Sequence 9, Appli
 c  3   17.4   20.0   6564  1  US-09-966-880A-10           Sequence 10, Appl
    4   15.8   18.2   6564  1  US-09-966-880A-10           Sequence 10, Appl
    5   14.4   16.6   2172  1  US-09-966-880A-15           Sequence 15, Appl
 c  6   14.4   16.6   5514  1  US-09-966-880A-9            Sequence 9, Appli
 c  7   13.4   15.4     87  1  US-09-966-880A-11           Sequence 11, Appl
 c  8   13.4   15.4   2172  1  US-09-966-880A-15           Sequence 15, Appl
    9   11.6   13.3    271  1  US-09-966-880A-13           Sequence 13, Appl
   10   10.4   12.0    148  1  US-09-966-880A-12           Sequence 12, Appl
 c 11   10.4   12.0    271  1  US-09-966-880A-13           Sequence 13, Appl
 c 12    9.8   11.3    148  1  US-09-966-880A-12           Sequence 12, Appl
   13    9.6   11.0    116  1  US-09-966-880A-14           Sequence 14, Appl
 c 14    8.4    9.7    116  1  US-09-966-880A-14           Sequence 14, Appl

                                ALIGNMENTS


RESULT 1
US-09-966-880A-11
; Sequence 11, Application US/09966880A
; GENERAL INFORMATION:
;  APPLICANT: Honjo, Tasuku
;  APPLICANT:  Muramatsu, Masamichi
;  TITLE OF INVENTION: NOVEL CYTIDINE DEAMINASE
;  FILE REFERENCE: 06501-088001
;  CURRENT APPLICATION NUMBER: US/09/966,880A
;  CURRENT FILING DATE:  2001-09-28
;  PRIOR APPLICATION NUMBER: PCT/JP00/01918
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;  PRIOR FILING DATE: 2000-03-28
;  PRIOR APPLICATION NUMBER: JP 11-371382
;  PRIOR FILING DATE: 1999-12-27
;  PRIOR APPLICATION NUMBER: JP 11-178999
;  PRIOR FILING DATE: 1999-06-24
;  PRIOR APPLICATION NUMBER: JP 11-87192
;  PRIOR FILING DATE: 1999-03-29
;  NUMBER OF SEQ ID NOS: 36
;  SOFTWARE: FastSEQ for Windows Version 4.0
; SEQ ID NO 11
;   LENGTH: 87
;   TYPE: DNA
;   ORGANISM: Homo sapiens
US-09-966-880A-11

  Query Match           100.0%;  Score 87;  DB 1;  Length 87;
  Best Local Similarity  100.0%;  Pred. No. 9e-62;
  Matches   87;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 AGAGAACCATCATTAATTGAAGTGAGATTTTTCTGGCCTGAGACTTGCAGGGAGGCAAGA 60
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db          1 AGAGAACCATCATTAATTGAAGTGAGATTTTTCTGGCCTGAGACTTGCAGGGAGGCAAGA 60

Qy         61 AGACACTCTGGACACCACTATGGACAG 87
              ||||||||||||||||||||||||||
Db         61 AGACACTCTGGACACCACTATGGACAG 87


RESULT 2
US-09-966-880A-9
; Sequence 9, Application US/09966880A
; GENERAL INFORMATION:
;  APPLICANT: Honjo, Tasuku
;  APPLICANT:  Muramatsu, Masamichi
;  TITLE OF INVENTION: NOVEL CYTIDINE DEAMINASE
;  FILE REFERENCE: 06501-088001
;  CURRENT APPLICATION NUMBER: US/09/966,880A
;  CURRENT FILING DATE:  2001-09-28
;  PRIOR APPLICATION NUMBER: PCT/JP00/01918
;  PRIOR FILING DATE: 2000-03-28
;  PRIOR APPLICATION NUMBER: JP 11-371382
;  PRIOR FILING DATE: 1999-12-27
;  PRIOR APPLICATION NUMBER: JP 11-178999
;  PRIOR FILING DATE: 1999-06-24
;  PRIOR APPLICATION NUMBER: JP 11-87192
;  PRIOR FILING DATE: 1999-03-29
;  NUMBER OF SEQ ID NOS: 36
;  SOFTWARE: FastSEQ for Windows Version 4.0
; SEQ ID NO 9
;   LENGTH: 5514
;   TYPE: DNA
;   ORGANISM: Homo sapiens
;   FEATURE:
;   NAME/KEY: intron
;   LOCATION: (1)...(1031)
;   FEATURE:
;   NAME/KEY: exon
;   LOCATION: (1032)...(1118)
;   FEATURE:
;   NAME/KEY: intron
;   LOCATION: (1119)...(5514)
US-09-966-880A-9

  Query Match           100.0%;  Score 87;  DB 1;  Length 5514;
  Best Local Similarity  100.0%;  Pred. No. 8.8e-58;
  Matches   87;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 AGAGAACCATCATTAATTGAAGTGAGATTTTTCTGGCCTGAGACTTGCAGGGAGGCAAGA 60
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db       1032 AGAGAACCATCATTAATTGAAGTGAGATTTTTCTGGCCTGAGACTTGCAGGGAGGCAAGA 1091

Qy         61 AGACACTCTGGACACCACTATGGACAG 87
              ||||||||||||||||||||||||||
Db       1092 AGACACTCTGGACACCACTATGGACAG 1118


RESULT 3
US-09-966-880A-10/c
; Sequence 10, Application US/09966880A
; GENERAL INFORMATION:
;  APPLICANT: Honjo, Tasuku
;  APPLICANT:  Muramatsu, Masamichi
;  TITLE OF INVENTION: NOVEL CYTIDINE DEAMINASE
;  FILE REFERENCE: 06501-088001
;  CURRENT APPLICATION NUMBER: US/09/966,880A
;  CURRENT FILING DATE:  2001-09-28
;  PRIOR APPLICATION NUMBER: PCT/JP00/01918
;  PRIOR FILING DATE: 2000-03-28
;  PRIOR APPLICATION NUMBER: JP 11-371382
;  PRIOR FILING DATE: 1999-12-27
;  PRIOR APPLICATION NUMBER: JP 11-178999
;  PRIOR FILING DATE: 1999-06-24
;  PRIOR APPLICATION NUMBER: JP 11-87192
;  PRIOR FILING DATE: 1999-03-29
;  NUMBER OF SEQ ID NOS: 36
;  SOFTWARE: FastSEQ for Windows Version 4.0
; SEQ ID NO 10
;   LENGTH: 6564
;   TYPE: DNA
;   ORGANISM: Homo sapiens
US-09-966-880A-10

  Query Match           20.0%;  Score 17.4;  DB 1;  Length 6564;
  Best Local Similarity  62.8%;  Pred. No. 0.21;
  Matches   27;  Conservative    0;  Mismatches   16;  Indels    0;  Gaps    0;

Qy          4 GAACCATCATTAATTGAAGTGAGATTTTTCTGGCCTGAGACTT 46
              |||||||| || | | |  |  |||  || | ||| | | ||
Db        543 GAACCATCCTTGACTCATTTCTTATTCCTCAGTCCTCATATTT 501


RESULT 4
US-09-966-880A-10
; Sequence 10, Application US/09966880A
; GENERAL INFORMATION:
;  APPLICANT: Honjo, Tasuku
;  APPLICANT:  Muramatsu, Masamichi
;  TITLE OF INVENTION: NOVEL CYTIDINE DEAMINASE
;  FILE REFERENCE: 06501-088001
;  CURRENT APPLICATION NUMBER: US/09/966,880A
;  CURRENT FILING DATE:  2001-09-28
;  PRIOR APPLICATION NUMBER: PCT/JP00/01918
;  PRIOR FILING DATE: 2000-03-28
;  PRIOR APPLICATION NUMBER: JP 11-371382
;  PRIOR FILING DATE: 1999-12-27
;  PRIOR APPLICATION NUMBER: JP 11-178999
;  PRIOR FILING DATE: 1999-06-24
;  PRIOR APPLICATION NUMBER: JP 11-87192
;  PRIOR FILING DATE: 1999-03-29
;  NUMBER OF SEQ ID NOS: 36
;  SOFTWARE: FastSEQ for Windows Version 4.0
; SEQ ID NO 10
;   LENGTH: 6564
;   TYPE: DNA
;   ORGANISM: Homo sapiens
US-09-966-880A-10

  Query Match           18.2%;  Score 15.8;  DB 1;  Length 6564;
  Best Local Similarity  65.7%;  Pred. No. 2.5;
  Matches   23;  Conservative    0;  Mismatches   12;  Indels    0;  Gaps    0;

Qy          9 ATCATTAATTGAAGTGAGATTTTTCTGGCCTGAGA 43
              || |||||| || |||  |||       || ||||
Db       1765 ATGATTAATTAAATTGATCTTTCGGCTACCCGAGA 1799
```

```
RESULT 5
US-09-966-880A-15
; Sequence 15, Application US/09966880A
; GENERAL INFORMATION:
;  APPLICANT: Honjo, Tasuku
;  APPLICANT:  Muramatsu, Masamichi
;  TITLE OF INVENTION: NOVEL CYTIDINE DEAMINASE
;  FILE REFERENCE: 06501-088001
;  CURRENT APPLICATION NUMBER: US/09/966,880A
;  CURRENT FILING DATE:  2001-09-28
;  PRIOR APPLICATION NUMBER: PCT/JP00/01918
;  PRIOR FILING DATE: 2000-03-28
;  PRIOR APPLICATION NUMBER: JP 11-371382
;  PRIOR FILING DATE: 1999-12-27
;  PRIOR APPLICATION NUMBER: JP 11-178999
;  PRIOR FILING DATE: 1999-06-24
;  PRIOR APPLICATION NUMBER: JP 11-87192
;  PRIOR FILING DATE: 1999-03-29
;  NUMBER OF SEQ ID NOS: 36
;  SOFTWARE: FastSEQ for Windows Version 4.0
; SEQ ID NO 15
;   LENGTH: 2172
;   TYPE: DNA
;   ORGANISM: Homo sapiens
US-09-966-880A-15

  Query Match             16.6%;  Score 14.4;  DB 1;  Length 2172;
  Best Local Similarity   65.6%;  Pred. No. 4.1;
  Matches   21;  Conservative    0;  Mismatches   11;  Indels    0;  Gaps    0;

Qy          19 GAAGTGAGATTTTTCTGGCCTGAGACTTGCAG 50
               ||||  | |    |||||||  | ||| ||| |
Db         227 GAAGGAACACAGGTCTGGCCAGGGACGTGCTG 258


RESULT 6
US-09-966-880A-9/c
; Sequence 9, Application US/09966880A
; GENERAL INFORMATION:
;  APPLICANT: Honjo, Tasuku
;  APPLICANT:  Muramatsu, Masamichi
;  TITLE OF INVENTION: NOVEL CYTIDINE DEAMINASE
;  FILE REFERENCE: 06501-088001
;  CURRENT APPLICATION NUMBER: US/09/966,880A
;  CURRENT FILING DATE:  2001-09-28
;  PRIOR APPLICATION NUMBER: PCT/JP00/01918
;  PRIOR FILING DATE: 2000-03-28
;  PRIOR APPLICATION NUMBER: JP 11-371382
;  PRIOR FILING DATE: 1999-12-27
;  PRIOR APPLICATION NUMBER: JP 11-178999
;  PRIOR FILING DATE: 1999-06-24
;  PRIOR APPLICATION NUMBER: JP 11-87192
;  PRIOR FILING DATE: 1999-03-29
;  NUMBER OF SEQ ID NOS: 36
;  SOFTWARE: FastSEQ for Windows Version 4.0
; SEQ ID NO 9
;   LENGTH: 5514
;   TYPE: DNA
;   ORGANISM: Homo sapiens
;   FEATURE:
;   NAME/KEY: intron
;   LOCATION: (1)...(1031)
;   FEATURE:
;   NAME/KEY: exon
;   LOCATION: (1032)...(1118)
;   FEATURE:
;   NAME/KEY: intron
;   LOCATION: (1119)...(5514)
US-09-966-880A-9

  Query Match             16.6%;  Score 14.4;  DB 1;  Length 5514;
  Best Local Similarity   51.6%;  Pred. No. 4.4;
  Matches   33;  Conservative    0;  Mismatches   31;  Indels    0;  Gaps    0;

Qy          24 GAGATTTTTCTGGCCTGAGACTTGCAGGGAGGCAAGAAGACACTCTGGACACCACTATGG 83
               |||  |    | ||||   | |  |    | |    || | ||||| ||  || ||  |
Db         642 GAGCCTCAGATAGCCTCTAATTCCCCCATATTCCCACAGTCTCTCTGAACCTCAGTACAG 583

Qy          84 ACAG 87
               ||||
Db         582 ACAG 579


RESULT 7
US-09-966-880A-11/c
; Sequence 11, Application US/09966880A
; GENERAL INFORMATION:
;  APPLICANT: Honjo, Tasuku
;  APPLICANT:  Muramatsu, Masamichi
;  TITLE OF INVENTION: NOVEL CYTIDINE DEAMINASE
;  FILE REFERENCE: 06501-088001
;  CURRENT APPLICATION NUMBER: US/09/966,880A
;  CURRENT FILING DATE:  2001-09-28
;  PRIOR APPLICATION NUMBER: PCT/JP00/01918
;  PRIOR FILING DATE: 2000-03-28
;  PRIOR APPLICATION NUMBER: JP 11-371382
;  PRIOR FILING DATE: 1999-12-27
;  PRIOR APPLICATION NUMBER: JP 11-178999
;  PRIOR FILING DATE: 1999-06-24
;  PRIOR APPLICATION NUMBER: JP 11-87192
;  PRIOR FILING DATE: 1999-03-29
;  NUMBER OF SEQ ID NOS: 36
;  SOFTWARE: FastSEQ for Windows Version 4.0
; SEQ ID NO 11
;   LENGTH: 87
;   TYPE: DNA
;   ORGANISM: Homo sapiens
US-09-966-880A-11

  Query Match             15.4%;  Score 13.4;  DB 1;  Length 87;
  Best Local Similarity   55.3%;  Pred. No. 0.026;
  Matches   26;  Conservative    0;  Mismatches   21;  Indels    0;  Gaps    0;

Qy          21 AGTGAGATTTTTCTGGCCTGAGACTTGCAGGGAGGCAAGAAGACACT 67
               ||||   | || |   ||||  | |  ||||   | ||  |   ||||
Db          67 AGTGTCTTCTTGCCTCCCTGCAAGTCTCAGGCCAGAAAAATCTCACT 21


RESULT 8
US-09-966-880A-15/c
; Sequence 15, Application US/09966880A
; GENERAL INFORMATION:
;  APPLICANT: Honjo, Tasuku
;  APPLICANT:  Muramatsu, Masamichi
;  TITLE OF INVENTION: NOVEL CYTIDINE DEAMINASE
;  FILE REFERENCE: 06501-088001
;  CURRENT APPLICATION NUMBER: US/09/966,880A
;  CURRENT FILING DATE:  2001-09-28
;  PRIOR APPLICATION NUMBER: PCT/JP00/01918
;  PRIOR FILING DATE: 2000-03-28
;  PRIOR APPLICATION NUMBER: JP 11-371382
;  PRIOR FILING DATE: 1999-12-27
;  PRIOR APPLICATION NUMBER: JP 11-178999
;  PRIOR FILING DATE: 1999-06-24
;  PRIOR APPLICATION NUMBER: JP 11-87192
;  PRIOR FILING DATE: 1999-03-29
;  NUMBER OF SEQ ID NOS: 36
;  SOFTWARE: FastSEQ for Windows Version 4.0
; SEQ ID NO 15
;   LENGTH: 2172
;   TYPE: DNA
;   ORGANISM: Homo sapiens
US-09-966-880A-15

  Query Match             15.4%;  Score 13.4;  DB 1;  Length 2172;
  Best Local Similarity   52.7%;  Pred. No. 11;
```

```
  Matches   29;  Conservative    0;  Mismatches   26;  Indels    0;  Gaps    0;

Qy          9 ATCATTAATTGAAGTGAGATTTTTCTGGCCTGAGACTTGCAGGGAGGCAAGAAGA 63
              || | ||  |||||| | | ||||     ||   ||   |       ||| ||||
Db       1831 ATGAATACATGAAGTAACAATTTTTAACTCTTTTACAAACTTATGTACAATAAGA 1777


RESULT 9
US-09-966-880A-13
; Sequence 13, Application US/09966880A
; GENERAL INFORMATION:
;  APPLICANT: Honjo, Tasuku
;  APPLICANT:  Muramatsu, Masamichi
;  TITLE OF INVENTION: NOVEL CYTIDINE DEAMINASE
;  FILE REFERENCE: 06501-088001
;  CURRENT APPLICATION NUMBER: US/09/966,880A
;  CURRENT FILING DATE:  2001-09-28
;  PRIOR APPLICATION NUMBER: PCT/JP00/01918
;  PRIOR FILING DATE: 2000-03-28
;  PRIOR APPLICATION NUMBER: JP 11-371382
;  PRIOR FILING DATE: 1999-12-27
;  PRIOR APPLICATION NUMBER: JP 11-178999
;  PRIOR FILING DATE: 1999-06-24
;  PRIOR APPLICATION NUMBER: JP 11-87192
;  PRIOR FILING DATE: 1999-03-29
;  NUMBER OF SEQ ID NOS: 36
;  SOFTWARE: FastSEQ for Windows Version 4.0
; SEQ ID NO 13
;   LENGTH: 271
;   TYPE: DNA
;   ORGANISM: Homo sapiens
US-09-966-880A-13

  Query Match             13.3%;  Score 11.6;  DB 1;  Length 271;
  Best Local Similarity   54.8%;  Pred. No. 8.7;
  Matches   23;  Conservative    0;  Mismatches   19;  Indels    0;  Gaps    0;

Qy         36 GCCTGAGACTTGCAGGGAGGCAAGAAGACACTCTGGACACCA 77
              | |||    |  || |||  ||||  || ||   ||  |  ||
Db        227 GGCTGCACCGCGCCGGGGTGCAAATAGCCATCATGACCTTCA 268


RESULT 10
US-09-966-880A-12
; Sequence 12, Application US/09966880A
; GENERAL INFORMATION:
;  APPLICANT: Honjo, Tasuku
;  APPLICANT:  Muramatsu, Masamichi
;  TITLE OF INVENTION: NOVEL CYTIDINE DEAMINASE
;  FILE REFERENCE: 06501-088001
;  CURRENT APPLICATION NUMBER: US/09/966,880A
;  CURRENT FILING DATE:  2001-09-28
;  PRIOR APPLICATION NUMBER: PCT/JP00/01918
;  PRIOR FILING DATE: 2000-03-28
;  PRIOR APPLICATION NUMBER: JP 11-371382
;  PRIOR FILING DATE: 1999-12-27
;  PRIOR APPLICATION NUMBER: JP 11-178999
;  PRIOR FILING DATE: 1999-06-24
;  PRIOR APPLICATION NUMBER: JP 11-87192
;  PRIOR FILING DATE: 1999-03-29
;  NUMBER OF SEQ ID NOS: 36
;  SOFTWARE: FastSEQ for Windows Version 4.0
; SEQ ID NO 12
;   LENGTH: 148
;   TYPE: DNA
;   ORGANISM: Homo sapiens
US-09-966-880A-12

  Query Match             12.0%;  Score 10.4;  DB 1;  Length 148;
  Best Local Similarity   55.6%;  Pred. No. 21;
  Matches   20;  Conservative    0;  Mismatches   16;  Indels    0;  Gaps    0;

Qy         17 TTGAAGTGAGATTTTTCTGGCCTGAGACTTGCAGGG 52
                | |  ||||||  |  |||  ||  |   || || |
Db         61 TCGGCGTGAGACCTACCTGTGCTACGTAGTGAAGAG 96


RESULT 11
US-09-966-880A-13/c
; Sequence 13, Application US/09966880A
; GENERAL INFORMATION:
;  APPLICANT: Honjo, Tasuku
;  APPLICANT:  Muramatsu, Masamichi
;  TITLE OF INVENTION: NOVEL CYTIDINE DEAMINASE
;  FILE REFERENCE: 06501-088001
;  CURRENT APPLICATION NUMBER: US/09/966,880A
;  CURRENT FILING DATE:  2001-09-28
;  PRIOR APPLICATION NUMBER: PCT/JP00/01918
;  PRIOR FILING DATE: 2000-03-28
;  PRIOR APPLICATION NUMBER: JP 11-371382
;  PRIOR FILING DATE: 1999-12-27
;  PRIOR APPLICATION NUMBER: JP 11-178999
;  PRIOR FILING DATE: 1999-06-24
;  PRIOR APPLICATION NUMBER: JP 11-87192
;  PRIOR FILING DATE: 1999-03-29
;  NUMBER OF SEQ ID NOS: 36
;  SOFTWARE: FastSEQ for Windows Version 4.0
; SEQ ID NO 13
;   LENGTH: 271
;   TYPE: DNA
;   ORGANISM: Homo sapiens
US-09-966-880A-13

  Query Match             12.0%;  Score 10.4;  DB 1;  Length 271;
  Best Local Similarity   60.7%;  Pred. No. 55;
  Matches   17;  Conservative    0;  Mismatches   11;  Indels    0;  Gaps    0;

Qy         35 GGCCTGAGACTTGCAGGGAGGCAAGAAG 62
              || || ||  ||||| |       |||||
Db        213 GGGCTCAGCCTTGCGGTCCTCACAGAAG 186


RESULT 12
US-09-966-880A-12/c
; Sequence 12, Application US/09966880A
; GENERAL INFORMATION:
;  APPLICANT: Honjo, Tasuku
;  APPLICANT:  Muramatsu, Masamichi
;  TITLE OF INVENTION: NOVEL CYTIDINE DEAMINASE
;  FILE REFERENCE: 06501-088001
;  CURRENT APPLICATION NUMBER: US/09/966,880A
;  CURRENT FILING DATE:  2001-09-28
;  PRIOR APPLICATION NUMBER: PCT/JP00/01918
;  PRIOR FILING DATE: 2000-03-28
;  PRIOR APPLICATION NUMBER: JP 11-371382
;  PRIOR FILING DATE: 1999-12-27
;  PRIOR APPLICATION NUMBER: JP 11-178999
;  PRIOR FILING DATE: 1999-06-24
;  PRIOR APPLICATION NUMBER: JP 11-87192
;  PRIOR FILING DATE: 1999-03-29
;  NUMBER OF SEQ ID NOS: 36
;  SOFTWARE: FastSEQ for Windows Version 4.0
; SEQ ID NO 12
;   LENGTH: 148
;   TYPE: DNA
;   ORGANISM: Homo sapiens
US-09-966-880A-12

  Query Match             11.3%;  Score 9.8;  DB 1;  Length 148;
  Best Local Similarity   66.7%;  Pred. No. 56;
  Matches   14;  Conservative    0;  Mismatches    7;  Indels    0;  Gaps    0;

Qy          1 AGAGAACCATCATTAATTGAA 21
              ||| |||||   |  | ||||
Db        138 AGATAACCAAAGTCCAGTGAA 118
```

```
RESULT 13
US-09-966-880A-14
; Sequence 14, Application US/09966880A
; GENERAL INFORMATION:
;  APPLICANT: Honjo, Tasuku
;  APPLICANT:  Muramatsu, Masamichi
;  TITLE OF INVENTION: NOVEL CYTIDINE DEAMINASE
;  FILE REFERENCE: 06501-088001
;  CURRENT APPLICATION NUMBER: US/09/966,880A
;  CURRENT FILING DATE:  2001-09-28
;  PRIOR APPLICATION NUMBER: PCT/JP00/01918
;  PRIOR FILING DATE: 2000-03-28
;  PRIOR APPLICATION NUMBER: JP 11-371382
;  PRIOR FILING DATE: 1999-12-27
;  PRIOR APPLICATION NUMBER: JP 11-178999
;  PRIOR FILING DATE: 1999-06-24
;  PRIOR APPLICATION NUMBER: JP 11-87192
;  PRIOR FILING DATE: 1999-03-29
;  NUMBER OF SEQ ID NOS: 36
;  SOFTWARE: FastSEQ for Windows Version 4.0
; SEQ ID NO 14
;   LENGTH: 116
;   TYPE: DNA
;   ORGANISM: Homo sapiens
US-09-966-880A-14

  Query Match             11.0%;  Score 9.6;  DB 1;  Length 116;
  Best Local Similarity   56.2%;  Pred. No. 51;
  Matches   18;  Conservative    0;  Mismatches   14;  Indels    0;  Gaps    0;

Qy         45 TTGCAGGGAGGCAAGAAGACACTCTGGACACC 76
              ||| ||   |  || |||   ||| |  |  ||
Db         25 TTGTAGAAAACCACGAAAGAACTTTCAAAGCC 56


RESULT 14
US-09-966-880A-14/c
; Sequence 14, Application US/09966880A
; GENERAL INFORMATION:
;  APPLICANT: Honjo, Tasuku
;  APPLICANT:  Muramatsu, Masamichi
;  TITLE OF INVENTION: NOVEL CYTIDINE DEAMINASE
;  FILE REFERENCE: 06501-088001
;  CURRENT APPLICATION NUMBER: US/09/966,880A
;  CURRENT FILING DATE:  2001-09-28
;  PRIOR APPLICATION NUMBER: PCT/JP00/01918
;  PRIOR FILING DATE: 2000-03-28
;  PRIOR APPLICATION NUMBER: JP 11-371382
;  PRIOR FILING DATE: 1999-12-27
;  PRIOR APPLICATION NUMBER: JP 11-178999
;  PRIOR FILING DATE: 1999-06-24
;  PRIOR APPLICATION NUMBER: JP 11-87192
;  PRIOR FILING DATE: 1999-03-29
;  NUMBER OF SEQ ID NOS: 36
;  SOFTWARE: FastSEQ for Windows Version 4.0
; SEQ ID NO 14
;   LENGTH: 116
;   TYPE: DNA
;   ORGANISM: Homo sapiens
US-09-966-880A-14

  Query Match              9.7%;  Score 8.4;  DB 1;  Length 116;
  Best Local Similarity   57.7%;  Pred. No. 1.9e+02;
  Matches   15;  Conservative    0;  Mismatches   11;  Indels    0;  Gaps    0;

Qy         49 AGGGAGGCAAGAAGACACTCTGGACA 74
              | ||| ||    |  |  |||||| |
Db        113 AAGGATGCGCCGAAGCTGTCTGGAGA 88


Search completed: March 10, 2004, 13:40:47
Job time : 0.74294 secs
```

```
                                GenCore version 5.1.6
                          Copyright (c) 1993 - 2004  Compugen Ltd.

OM nucleic - nucleic search, using sw model

Run on:          March 10, 2004, 13:38:36 ; Search time 1.26385 Seconds
                                            (without alignments)
                                            3.483 Million cell updates/sec

Title:           US-09-966-880A-12
Perfect score:   148
Sequence:        1 cctcttgatgaaccggagga.....ttggttatcttcgcaataag 148

Scoring table:   IDENTITY_NUC
                 Gapop 10.0 , Gapext 0.5

Searched:        7 seqs, 14872 residues

Total number of hits satisfying chosen parameters:      14

Minimum DB seq length: 0
Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%
                 Maximum Match 100%
                 Listing first 45 summaries

Database :       US09966880A.seq:*

      Pred. No. is the number of results predicted by chance to have a
      score greater than or equal to the score of the result being printed,
      and is derived by analysis of the total score distribution.

                                    SUMMARIES

                    %
Result              Query
  No.    Score    Match  Length DB  ID                          Description
-------------------------------------------------------------------------------
     1      148   100.0     148  1  US-09-966-880A-12           Sequence 12, Appl
     2      148   100.0    6564  1  US-09-966-880A-10           Sequence 10, Appl
c    3     18.3    12.4    5514  1  US-09-966-880A-9            Sequence 9, Appli
c    4     15.8    10.7    6564  1  US-09-966-880A-10           Sequence 10, Appl
     5     15.4    10.4    5514  1  US-09-966-880A-9            Sequence 9, Appli
c    6     15.2    10.3     148  1  US-09-966-880A-12           Sequence 12, Appl
     7     14.8    10.0    2172  1  US-09-966-880A-15           Sequence 15, Appl
c    8     14.8    10.0    2172  1  US-09-966-880A-15           Sequence 15, Appl
c    9     13.8     9.3     271  1  US-09-966-880A-13           Sequence 13, Appl
c   10     13.4     9.1     116  1  US-09-966-880A-14           Sequence 14, Appl
    11     12.6     8.5     271  1  US-09-966-880A-13           Sequence 13, Appl
    12     10.4     7.0      87  1  US-09-966-880A-11           Sequence 11, Appl
c   13      9.8     6.6      87  1  US-09-966-880A-11           Sequence 11, Appl
    14        9     6.1     116  1  US-09-966-880A-14           Sequence 14, Appl

                                   ALIGNMENTS


RESULT 1
US-09-966-880A-12
; Sequence 12, Application US/09966880A
; GENERAL INFORMATION:
;  APPLICANT: Honjo, Tasuku
;  APPLICANT:  Muramatsu, Masamichi
;  TITLE OF INVENTION: NOVEL CYTIDINE DEAMINASE
;  FILE REFERENCE: 06501-088001
;  CURRENT APPLICATION NUMBER: US/09/966,880A
;  CURRENT FILING DATE:  2001-09-28
;  PRIOR APPLICATION NUMBER: PCT/JP00/01918
;  PRIOR FILING DATE: 2000-03-28
;  PRIOR APPLICATION NUMBER: JP 11-371382
;  PRIOR FILING DATE: 1999-12-27
```

```
;  PRIOR APPLICATION NUMBER: JP 11-178999
;  PRIOR FILING DATE: 1999-06-24
;  PRIOR APPLICATION NUMBER: JP 11-87192
;  PRIOR FILING DATE: 1999-03-29
;  NUMBER OF SEQ ID NOS: 36
;  SOFTWARE: FastSEQ for Windows Version 4.0
; SEQ ID NO 12
;   LENGTH: 148
;   TYPE: DNA
;   ORGANISM: Homo sapiens
US-09-966-880A-12

  Query Match            100.0%;  Score 148;  DB 1;  Length 148;
  Best Local Similarity  100.0%;  Pred. No. 1.1;
  Matches  148;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 CCTCTTGATGAACCGGAGGAAGTTTCTTTACCAATTCAAAAATGTCCGCTGGGCTAAGGG 60
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db          1 CCTCTTGATGAACCGGAGGAAGTTTCTTTACCAATTCAAAAATGTCCGCTGGGCTAAGGG 60

Qy         61 TCGGCGTGAGACCTACCTGTGCTACGTAGTGAAGAGGCGTGACAGTGCTACATCCTTTTC 120
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db         61 TCGGCGTGAGACCTACCTGTGCTACGTAGTGAAGAGGCGTGACAGTGCTACATCCTTTTC 120

Qy        121 ACTGGACTTTGGTTATCTTCGCAATAAG 148
              |||||||||||||||||||||||||||
Db        121 ACTGGACTTTGGTTATCTTCGCAATAAG 148


RESULT 2
US-09-966-880A-10
; Sequence 10, Application US/09966880A
; GENERAL INFORMATION:
;  APPLICANT: Honjo, Tasuku
;  APPLICANT:  Muramatsu, Masamichi
;  TITLE OF INVENTION: NOVEL CYTIDINE DEAMINASE
;  FILE REFERENCE: 06501-088001
;  CURRENT APPLICATION NUMBER: US/09/966,880A
;  CURRENT FILING DATE:  2001-09-28
;  PRIOR APPLICATION NUMBER: PCT/JP00/01918
;  PRIOR FILING DATE: 2000-03-28
;  PRIOR APPLICATION NUMBER: JP 11-371382
;  PRIOR FILING DATE: 1999-12-27
;  PRIOR APPLICATION NUMBER: JP 11-178999
;  PRIOR FILING DATE: 1999-06-24
;  PRIOR APPLICATION NUMBER: JP 11-87192
;  PRIOR FILING DATE: 1999-03-29
;  NUMBER OF SEQ ID NOS: 36
;  SOFTWARE: FastSEQ for Windows Version 4.0
; SEQ ID NO 10
;   LENGTH: 6564
;   TYPE: DNA
;   ORGANISM: Homo sapiens
US-09-966-880A-10

  Query Match            100.0%;  Score 148;  DB 1;  Length 6564;
  Best Local Similarity  100.0%;  Pred. No. 0.03;
  Matches  148;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 CCTCTTGATGAACCGGAGGAAGTTTCTTTACCAATTCAAAAATGTCCGCTGGGCTAAGGG 60
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db       1065 CCTCTTGATGAACCGGAGGAAGTTTCTTTACCAATTCAAAAATGTCCGCTGGGCTAAGGG 1124

Qy         61 TCGGCGTGAGACCTACCTGTGCTACGTAGTGAAGAGGCGTGACAGTGCTACATCCTTTTC 120
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db       1125 TCGGCGTGAGACCTACCTGTGCTACGTAGTGAAGAGGCGTGACAGTGCTACATCCTTTTC 1184

Qy        121 ACTGGACTTTGGTTATCTTCGCAATAAG 148
              |||||||||||||||||||||||||||
Db       1185 ACTGGACTTTGGTTATCTTCGCAATAAG 1212


RESULT 3
US-09-966-880A-9/c
; Sequence 9, Application US/09966880A
; GENERAL INFORMATION:
;  APPLICANT: Honjo, Tasuku
;  APPLICANT:  Muramatsu, Masamichi
;  TITLE OF INVENTION: NOVEL CYTIDINE DEAMINASE
;  FILE REFERENCE: 06501-088001
;  CURRENT APPLICATION NUMBER: US/09/966,880A
;  CURRENT FILING DATE:  2001-09-28
;  PRIOR APPLICATION NUMBER: PCT/JP00/01918
;  PRIOR FILING DATE: 2000-03-28
;  PRIOR APPLICATION NUMBER: JP 11-371382
;  PRIOR FILING DATE: 1999-12-27
;  PRIOR APPLICATION NUMBER: JP 11-178999
;  PRIOR FILING DATE: 1999-06-24
;  PRIOR APPLICATION NUMBER: JP 11-87192
;  PRIOR FILING DATE: 1999-03-29
;  NUMBER OF SEQ ID NOS: 36
;  SOFTWARE: FastSEQ for Windows Version 4.0
; SEQ ID NO 9
;   LENGTH: 5514
;   TYPE: DNA
;   ORGANISM: Homo sapiens
;   FEATURE:
;   NAME/KEY: intron
;   LOCATION: (1)...(1031)
;   FEATURE:
;   NAME/KEY: exon
;   LOCATION: (1032)...(1118)
;   FEATURE:
;   NAME/KEY: intron
;   LOCATION: (1119)...(5514)
US-09-966-880A-9

  Query Match            12.4%;  Score 18.3;  DB 1;  Length 5514;
  Best Local Similarity  64.6%;  Pred. No. 2.2;
  Matches   42;  Conservative    0;  Mismatches   22;  Indels    1;  Gaps    1;

Qy         71 ACCTACCTGTGCTACGTAG-TGAAGAGGCGTGACAGTGCTACATCCTTTTCACTGGACTT 129
              |||  |||| |||  |||| |||  | |   ||      ||||||| ||||   || ||| |
Db       2964 ACCCTCCTGGGCTGTGTAGATGAGAAAGGCAGAGGAATCTACATCTTTTTACATGCACCT 2905

Qy        130 TGGTT 134
              |||||
Db       2904 TGGTT 2900


RESULT 4
US-09-966-880A-10/c
; Sequence 10, Application US/09966880A
; GENERAL INFORMATION:
;  APPLICANT: Honjo, Tasuku
;  APPLICANT:  Muramatsu, Masamichi
;  TITLE OF INVENTION: NOVEL CYTIDINE DEAMINASE
;  FILE REFERENCE: 06501-088001
;  CURRENT APPLICATION NUMBER: US/09/966,880A
;  CURRENT FILING DATE:  2001-09-28
;  PRIOR APPLICATION NUMBER: PCT/JP00/01918
;  PRIOR FILING DATE: 2000-03-28
;  PRIOR APPLICATION NUMBER: JP 11-371382
;  PRIOR FILING DATE: 1999-12-27
;  PRIOR APPLICATION NUMBER: JP 11-178999
;  PRIOR FILING DATE: 1999-06-24
;  PRIOR APPLICATION NUMBER: JP 11-87192
;  PRIOR FILING DATE: 1999-03-29
;  NUMBER OF SEQ ID NOS: 36
;  SOFTWARE: FastSEQ for Windows Version 4.0
; SEQ ID NO 10
;   LENGTH: 6564
;   TYPE: DNA
;   ORGANISM: Homo sapiens
US-09-966-880A-10
```

```
  Query Match             10.7%;  Score 15.8;  DB 1;  Length 6564;
  Best Local Similarity   60.5%;  Pred. No. 2;
  Matches   26;  Conservative    0;  Mismatches   17;  Indels    0;  Gaps    0;

Qy         16 GAGGAAGTTTCTTTACCAATTCAAAAATGTCCGCTGGGCTAAG 58
              ||   | ||| |||  ||  |  ||||| |  ||| ||  |||
Db       1601 GACACAATTTGTTTTTCACATTTAAAATTTTTGCTTGGACAAG 1559


RESULT 5
US-09-966-880A-9
; Sequence 9, Application US/09966880A
; GENERAL INFORMATION:
;  APPLICANT: Honjo, Tasuku
;  APPLICANT:  Muramatsu, Masamichi
;  TITLE OF INVENTION: NOVEL CYTIDINE DEAMINASE
;  FILE REFERENCE: 06501-088001
;  CURRENT APPLICATION NUMBER: US/09/966,880A
;  CURRENT FILING DATE:  2001-09-28
;  PRIOR APPLICATION NUMBER: PCT/JP00/01918
;  PRIOR FILING DATE: 2000-03-28
;  PRIOR APPLICATION NUMBER: JP 11-371382
;  PRIOR FILING DATE: 1999-12-27
;  PRIOR APPLICATION NUMBER: JP 11-178999
;  PRIOR FILING DATE: 1999-06-24
;  PRIOR APPLICATION NUMBER: JP 11-87192
;  PRIOR FILING DATE: 1999-03-29
;  NUMBER OF SEQ ID NOS: 36
;  SOFTWARE: FastSEQ for Windows Version 4.0
; SEQ ID NO 9
;   LENGTH: 5514
;   TYPE: DNA
;   ORGANISM: Homo sapiens
;   FEATURE:
;   NAME/KEY: intron
;   LOCATION: (1)...(1031)
;   FEATURE:
;   NAME/KEY: exon
;   LOCATION: (1032)...(1118)
;   FEATURE:
;   NAME/KEY: intron
;   LOCATION: (1119)...(5514)
US-09-966-880A-9

  Query Match             10.4%;  Score 15.4;  DB 1;  Length 5514;
  Best Local Similarity   76.0%;  Pred. No. 2.4;
  Matches   19;  Conservative    0;  Mismatches    6;  Indels    0;  Gaps    0;

Qy         69 AGACCTACCTGTGCTACGTAGTGAA 93
              |||||  |||| || ||  ||||||
Db       4349 AGACCAGCCTGGGCAACACAGTGAA 4373


RESULT 6
US-09-966-880A-12/c
; Sequence 12, Application US/09966880A
; GENERAL INFORMATION:
;  APPLICANT: Honjo, Tasuku
;  APPLICANT:  Muramatsu, Masamichi
;  TITLE OF INVENTION: NOVEL CYTIDINE DEAMINASE
;  FILE REFERENCE: 06501-088001
;  CURRENT APPLICATION NUMBER: US/09/966,880A
;  CURRENT FILING DATE:  2001-09-28
;  PRIOR APPLICATION NUMBER: PCT/JP00/01918
;  PRIOR FILING DATE: 2000-03-28
;  PRIOR APPLICATION NUMBER: JP 11-371382
;  PRIOR FILING DATE: 1999-12-27
;  PRIOR APPLICATION NUMBER: JP 11-178999
;  PRIOR FILING DATE: 1999-06-24
;  PRIOR APPLICATION NUMBER: JP 11-87192
;  PRIOR FILING DATE: 1999-03-29
;  NUMBER OF SEQ ID NOS: 36
;  SOFTWARE: FastSEQ for Windows Version 4.0
; SEQ ID NO 12
;   LENGTH: 148
;   TYPE: DNA
;   ORGANISM: Homo sapiens
US-09-966-880A-12

  Query Match             10.3%;  Score 15.2;  DB 1;  Length 148;
  Best Local Similarity   45.2%;  Pred. No. 78;
  Matches   56;  Conservative    0;  Mismatches   68;  Indels    0;  Gaps    0;

Qy         24 TTCTTTACCAATTCAAAAATGTCCGCTGGGCTAAGGGTCGGCGTGAGACCTACCTGTGCT 83
              || ||     |  | |  || ||||  ||         || |   ||  ||    ||  ||
Db        147 TTATTGCGAAGATAACCAAAGTCCAGTGAAAAGGATGTAGCACTGTCACGCCTCTTCACT 88

Qy         84 ACGTAGTGAAGAGGCGTGACAGTGCTACATCCTTTTCACTGGACTTTGGTTATCTTCGCA 143
              ||||||   ||   ||  ||  | ||         ||  |||| ||  | |  |    |
Db         87 ACGTAGCACAGGTAGGTCTCACGCCGACCCTTAGCCCAGCGGACATTTTTGAATTGGTAA 28

Qy        144 ATAA 147
              | ||
Db         27 AGAA 24


RESULT 7
US-09-966-880A-15
; Sequence 15, Application US/09966880A
; GENERAL INFORMATION:
;  APPLICANT: Honjo, Tasuku
;  APPLICANT:  Muramatsu, Masamichi
;  TITLE OF INVENTION: NOVEL CYTIDINE DEAMINASE
;  FILE REFERENCE: 06501-088001
;  CURRENT APPLICATION NUMBER: US/09/966,880A
;  CURRENT FILING DATE:  2001-09-28
;  PRIOR APPLICATION NUMBER: PCT/JP00/01918
;  PRIOR FILING DATE: 2000-03-28
;  PRIOR APPLICATION NUMBER: JP 11-371382
;  PRIOR FILING DATE: 1999-12-27
;  PRIOR APPLICATION NUMBER: JP 11-178999
;  PRIOR FILING DATE: 1999-06-24
;  PRIOR APPLICATION NUMBER: JP 11-87192
;  PRIOR FILING DATE: 1999-03-29
;  NUMBER OF SEQ ID NOS: 36
;  SOFTWARE: FastSEQ for Windows Version 4.0
; SEQ ID NO 15
;   LENGTH: 2172
;   TYPE: DNA
;   ORGANISM: Homo sapiens
US-09-966-880A-15

  Query Match             10.0%;  Score 14.8;  DB 1;  Length 2172;
  Best Local Similarity   56.0%;  Pred. No. 5.9;
  Matches   28;  Conservative    0;  Mismatches   22;  Indels    0;  Gaps    0;

Qy         70 GACCTACCTGTGCTACGTAGTGAAGAGGCGTGACAGTGCTACATCCTTTT 119
              ||  | | | |    |  || ||||  || ||  ||  ||| |||   |||
Db       1876 GATTTCCTTTTCTGATATATTGAAATGGAGTCTCAAAGCTTCATAAATTT 1925


RESULT 8
US-09-966-880A-15/c
; Sequence 15, Application US/09966880A
; GENERAL INFORMATION:
;  APPLICANT: Honjo, Tasuku
;  APPLICANT:  Muramatsu, Masamichi
;  TITLE OF INVENTION: NOVEL CYTIDINE DEAMINASE
;  FILE REFERENCE: 06501-088001
;  CURRENT APPLICATION NUMBER: US/09/966,880A
;  CURRENT FILING DATE:  2001-09-28
;  PRIOR APPLICATION NUMBER: PCT/JP00/01918
;  PRIOR FILING DATE: 2000-03-28
;  PRIOR APPLICATION NUMBER: JP 11-371382
;  PRIOR FILING DATE: 1999-12-27
;  PRIOR APPLICATION NUMBER: JP 11-178999
```

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;  PRIOR FILING DATE: 1999-06-24
;  PRIOR APPLICATION NUMBER: JP 11-87192
;  PRIOR FILING DATE: 1999-03-29
;  NUMBER OF SEQ ID NOS: 36
;  SOFTWARE: FastSEQ for Windows Version 4.0
; SEQ ID NO 15
;   LENGTH: 2172
;   TYPE: DNA
;   ORGANISM: Homo sapiens
US-09-966-880A-15

  Query Match             10.0%;  Score 14.8;  DB 1;  Length 2172;
  Best Local Similarity   64.7%;  Pred. No. 5.9;
  Matches   22;  Conservative    0;  Mismatches   12;  Indels    0;  Gaps    0;

Qy        106 TGCTACATCCTTTTCACTGGACTTTGGTTATCTT 139
              | |  ||||||| || |   | | | ||| ||||
Db       1556 TTCCCCATCCTTCTCTCCCAAATATTGTTCTCTT 1523


RESULT 9
US-09-966-880A-13/c
; Sequence 13, Application US/09966880A
; GENERAL INFORMATION:
;  APPLICANT: Honjo, Tasuku
;  APPLICANT:  Muramatsu, Masamichi
;  TITLE OF INVENTION: NOVEL CYTIDINE DEAMINASE
;  FILE REFERENCE: 06501-088001
;  CURRENT APPLICATION NUMBER: US/09/966,880A
;  CURRENT FILING DATE:  2001-09-28
;  PRIOR APPLICATION NUMBER: PCT/JP00/01918
;  PRIOR FILING DATE: 2000-03-28
;  PRIOR APPLICATION NUMBER: JP 11-371382
;  PRIOR FILING DATE: 1999-12-27
;  PRIOR APPLICATION NUMBER: JP 11-178999
;  PRIOR FILING DATE: 1999-06-24
;  PRIOR APPLICATION NUMBER: JP 11-87192
;  PRIOR FILING DATE: 1999-03-29
;  NUMBER OF SEQ ID NOS: 36
;  SOFTWARE: FastSEQ for Windows Version 4.0
; SEQ ID NO 13
;   LENGTH: 271
;   TYPE: DNA
;   ORGANISM: Homo sapiens
US-09-966-880A-13

  Query Match              9.3%;  Score 13.8;  DB 1;  Length 271;
  Best Local Similarity   49.3%;  Pred. No. 45;
  Matches   36;  Conservative    0;  Mismatches   37;  Indels    0;  Gaps    0;

Qy         76 CCTGTGCTACGTAGTGAAGAGGCGTGACAGTGCTACATCCTTTTCACTGGACTTTGGTTA 135
              | || | | |  |  |||| | |   |   | |   | |   ||||   || || |
Db        204 CTTGCGGTCCTCACAGAAGTAGAGGCGCGCGGTGAAGATCCTCAGACTGAGGTTGGGGTT 145

Qy        136 TCTTCGCAATAAG 148
              | |||||  |||
Db        144 CCCTCGCAGAAAG 132


RESULT 10
US-09-966-880A-14/c
; Sequence 14, Application US/09966880A
; GENERAL INFORMATION:
;  APPLICANT: Honjo, Tasuku
;  APPLICANT:  Muramatsu, Masamichi
;  TITLE OF INVENTION: NOVEL CYTIDINE DEAMINASE
;  FILE REFERENCE: 06501-088001
;  CURRENT APPLICATION NUMBER: US/09/966,880A
;  CURRENT FILING DATE:  2001-09-28
;  PRIOR APPLICATION NUMBER: PCT/JP00/01918
;  PRIOR FILING DATE: 2000-03-28
;  PRIOR APPLICATION NUMBER: JP 11-371382
;  PRIOR FILING DATE: 1999-12-27
;  PRIOR APPLICATION NUMBER: JP 11-178999
;  PRIOR FILING DATE: 1999-06-24
;  PRIOR APPLICATION NUMBER: JP 11-87192
;  PRIOR FILING DATE: 1999-03-29
;  NUMBER OF SEQ ID NOS: 36
;  SOFTWARE: FastSEQ for Windows Version 4.0
; SEQ ID NO 14
;   LENGTH: 116
;   TYPE: DNA
;   ORGANISM: Homo sapiens
US-09-966-880A-14

  Query Match              9.1%;  Score 13.4;  DB 1;  Length 116;
  Best Local Similarity   46.3%;  Pred. No. 1e+02;
  Matches   44;  Conservative    0;  Mismatches   51;  Indels    0;  Gaps    0;

Qy         54 CTAAGGGTCGGCGTGAGACCTACCTGTGCTACGTAGTGAAGAGGCGTGACAGTGCTACAT 113
              | || ||  |    ||  |   | | |  ||| | ||||    | ||       | |
Db        116 CAAAAGGATGCGCCGAAGCTGTCTGGAGAGACGAACTGAATTTTCATGCAGCCCTTCCCA 57

Qy        114 CCTTTTCACTGGACTTTGGTTATCTTCGCAATAAG 148
              |||  |  |  |||| ||  | |||   | |||
Db         56 GGCTTTGAAAGTTCTTTCGTGGTTTTCTACAAAAG 22


RESULT 11
US-09-966-880A-13
; Sequence 13, Application US/09966880A
; GENERAL INFORMATION:
;  APPLICANT: Honjo, Tasuku
;  APPLICANT:  Muramatsu, Masamichi
;  TITLE OF INVENTION: NOVEL CYTIDINE DEAMINASE
;  FILE REFERENCE: 06501-088001
;  CURRENT APPLICATION NUMBER: US/09/966,880A
;  CURRENT FILING DATE:  2001-09-28
;  PRIOR APPLICATION NUMBER: PCT/JP00/01918
;  PRIOR FILING DATE: 2000-03-28
;  PRIOR APPLICATION NUMBER: JP 11-371382
;  PRIOR FILING DATE: 1999-12-27
;  PRIOR APPLICATION NUMBER: JP 11-178999
;  PRIOR FILING DATE: 1999-06-24
;  PRIOR APPLICATION NUMBER: JP 11-87192
;  PRIOR FILING DATE: 1999-03-29
;  NUMBER OF SEQ ID NOS: 36
;  SOFTWARE: FastSEQ for Windows Version 4.0
; SEQ ID NO 13
;   LENGTH: 271
;   TYPE: DNA
;   ORGANISM: Homo sapiens
US-09-966-880A-13

  Query Match              8.5%;  Score 12.6;  DB 1;  Length 271;
  Best Local Similarity   66.7%;  Pred. No. 47;
  Matches   18;  Conservative    0;  Mismatches    9;  Indels    0;  Gaps    0;

Qy         49 CTGGGCTAAGGGTCGGCGTGAGACCTA 75
              ||  ||||    ||||  || ||||||
Db         28 CTCCGCTACATCTCGGACTGGGACCTA 54


RESULT 12
US-09-966-880A-11
; Sequence 11, Application US/09966880A
; GENERAL INFORMATION:
;  APPLICANT: Honjo, Tasuku
;  APPLICANT:  Muramatsu, Masamichi
;  TITLE OF INVENTION: NOVEL CYTIDINE DEAMINASE
;  FILE REFERENCE: 06501-088001
;  CURRENT APPLICATION NUMBER: US/09/966,880A
;  CURRENT FILING DATE:  2001-09-28
;  PRIOR APPLICATION NUMBER: PCT/JP00/01918
;  PRIOR FILING DATE: 2000-03-28
;  PRIOR APPLICATION NUMBER: JP 11-371382
```

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;  PRIOR FILING DATE: 1999-12-27
;  PRIOR APPLICATION NUMBER: JP 11-178999
;  PRIOR FILING DATE: 1999-06-24
;  PRIOR APPLICATION NUMBER: JP 11-87192
;  PRIOR FILING DATE: 1999-03-29
;  NUMBER OF SEQ ID NOS: 36
;  SOFTWARE: FastSEQ for Windows Version 4.0
; SEQ ID NO 11
;   LENGTH: 87
;   TYPE: DNA
;   ORGANISM: Homo sapiens
US-09-966-880A-11

  Query Match             7.0%;  Score 10.4;  DB 1;  Length 87;
  Best Local Similarity   55.6%;  Pred. No. 1.5e+02;
  Matches   20;  Conservative    0;  Mismatches   16;  Indels    0;  Gaps    0;

Qy         61 TCGGCGTGAGACCTACCTGTGCTACGTAGTGAAGAG 96
              | |  ||||||  |  |||  ||  |   || || |
Db         17 TTGAAGTGAGATTTTTCTGGCCTGAGACTTGCAGGG 52


RESULT 13
US-09-966-880A-11/c
; Sequence 11, Application US/09966880A
; GENERAL INFORMATION:
;  APPLICANT: Honjo, Tasuku
;  APPLICANT:  Muramatsu, Masamichi
;  TITLE OF INVENTION: NOVEL CYTIDINE DEAMINASE
;  FILE REFERENCE: 06501-088001
;  CURRENT APPLICATION NUMBER: US/09/966,880A
;  CURRENT FILING DATE:  2001-09-28
;  PRIOR APPLICATION NUMBER: PCT/JP00/01918
;  PRIOR FILING DATE: 2000-03-28
;  PRIOR APPLICATION NUMBER: JP 11-371382
;  PRIOR FILING DATE: 1999-12-27
;  PRIOR APPLICATION NUMBER: JP 11-178999
;  PRIOR FILING DATE: 1999-06-24
;  PRIOR APPLICATION NUMBER: JP 11-87192
;  PRIOR FILING DATE: 1999-03-29
;  NUMBER OF SEQ ID NOS: 36
;  SOFTWARE: FastSEQ for Windows Version 4.0
; SEQ ID NO 11
;   LENGTH: 87
;   TYPE: DNA
;   ORGANISM: Homo sapiens
US-09-966-880A-11

  Query Match             6.6%;  Score 9.8;  DB 1;  Length 87;
  Best Local Similarity   66.7%;  Pred. No. 1.5e+02;
  Matches   14;  Conservative    0;  Mismatches    7;  Indels    0;  Gaps    0;

Qy        118 TTCACTGGACTTTGGTTATCT 138
              |||| |   |   ||||| |||
Db         21 TTCAATTAATGATGGTTCTCT 1


RESULT 14
US-09-966-880A-14
; Sequence 14, Application US/09966880A
; GENERAL INFORMATION:
;  APPLICANT: Honjo, Tasuku
;  APPLICANT:  Muramatsu, Masamichi
;  TITLE OF INVENTION: NOVEL CYTIDINE DEAMINASE
;  FILE REFERENCE: 06501-088001
;  CURRENT APPLICATION NUMBER: US/09/966,880A
;  CURRENT FILING DATE:  2001-09-28
;  PRIOR APPLICATION NUMBER: PCT/JP00/01918
;  PRIOR FILING DATE: 2000-03-28
;  PRIOR APPLICATION NUMBER: JP 11-371382
;  PRIOR FILING DATE: 1999-12-27
;  PRIOR APPLICATION NUMBER: JP 11-178999
;  PRIOR FILING DATE: 1999-06-24
;  PRIOR APPLICATION NUMBER: JP 11-87192
;  PRIOR FILING DATE: 1999-03-29
;  NUMBER OF SEQ ID NOS: 36
;  SOFTWARE: FastSEQ for Windows Version 4.0
; SEQ ID NO 14
;   LENGTH: 116
;   TYPE: DNA
;   ORGANISM: Homo sapiens
US-09-966-880A-14

  Query Match             6.1%;  Score 9;  DB 1;  Length 116;
  Best Local Similarity   100.0%;  Pred. No. 1.2e+02;
  Matches    9;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy        111 CATCCTTTT 119
              |||||||||
Db        107 CATCCTTTT 115


Search completed: March 10, 2004, 13:40:47
Job time : 1.26385 secs

                                GenCore version 5.1.6
                  Copyright (c) 1993 - 2004  Compugen Ltd.


OM nucleic - nucleic search, using sw model

Run on:         March 10, 2004, 13:38:36 ; Search time 2.31421 Seconds
                                            (without alignments)
                                            3.483 Million cell updates/sec

Title:          US-09-966-880A-13
Perfect score:  271
Sequence:       1 aacggctgccacgtggaatt.........agccatcatgaccttcaaag 271

Scoring table:  IDENTITY_NUC
                Gapop 10.0 , Gapext 0.5

Searched:       7 seqs, 14872 residues

Total number of hits satisfying chosen parameters:      14

Minimum DB seq length: 0
Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%
                 Maximum Match 100%
                 Listing first 45 summaries

Database :      US09966880A.seq:*

     Pred. No. is the number of results predicted by chance to have a
     score greater than or equal to the score of the result being printed,
     and is derived by analysis of the total score distribution.

                                    SUMMARIES

                  %
Result            Query
   No.    Score  Match Length DB  ID                          Description
-------------------------------------------------------------------------------
     1      271  100.0    271  1  US-09-966-880A-13           Sequence 13, Appl
     2      271  100.0   6564  1  US-09-966-880A-10           Sequence 10, Appl
c    3     20.6    7.6   6564  1  US-09-966-880A-10           Sequence 10, Appl
c    4     20.2    7.5    271  1  US-09-966-880A-13           Sequence 13, Appl
c    5     17.6    6.5   5514  1  US-09-966-880A-9            Sequence 9, Appli
     6       16    5.9   5514  1  US-09-966-880A-9            Sequence 9, Appli
c    7     13.8    5.1    148  1  US-09-966-880A-12           Sequence 12, Appl
c    8     13.4    4.9   2172  1  US-09-966-880A-15           Sequence 15, Appl
     9     12.6    4.6    148  1  US-09-966-880A-12           Sequence 12, Appl
    10       12    4.4   2172  1  US-09-966-880A-15           Sequence 15, Appl
    11     11.6    4.3     87  1  US-09-966-880A-11           Sequence 11, Appl
c   12     10.4    3.8     87  1  US-09-966-880A-11           Sequence 11, Appl
```

c	13	10	3.7	116	1	US-09-966-880A-14	Sequence 14, Appl
	14	8.8	3.2	116	1	US-09-966-880A-14	Sequence 14, Appl

ALIGNMENTS

```
RESULT 1
US-09-966-880A-13
; Sequence 13, Application US/09966880A
; GENERAL INFORMATION:
;  APPLICANT: Honjo, Tasuku
;  APPLICANT:  Muramatsu, Masamichi
;  TITLE OF INVENTION: NOVEL CYTIDINE DEAMINASE
;  FILE REFERENCE: 06501-088001
;  CURRENT APPLICATION NUMBER: US/09/966,880A
;  CURRENT FILING DATE:  2001-09-28
;  PRIOR APPLICATION NUMBER: PCT/JP00/01918
;  PRIOR FILING DATE: 2000-03-28
;  PRIOR APPLICATION NUMBER: JP 11-371382
;  PRIOR FILING DATE: 1999-12-27
;  PRIOR APPLICATION NUMBER: JP 11-178999
;  PRIOR FILING DATE: 1999-06-24
;  PRIOR APPLICATION NUMBER: JP 11-87192
;  PRIOR FILING DATE: 1999-03-29
;  NUMBER OF SEQ ID NOS: 36
;  SOFTWARE: FastSEQ for Windows Version 4.0
; SEQ ID NO 13
;   LENGTH: 271
;   TYPE: DNA
;   ORGANISM: Homo sapiens
US-09-966-880A-13

  Query Match             100.0%;  Score 271;  DB 1;  Length 271;
  Best Local Similarity   100.0%;  Pred. No. 0.68;
  Matches  271;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 AACGGCTGCCACGTGGAATTGCTCTTCCTCCGCTACATCTCGGACTGGGACCTAGACCCT 60
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db          1 AACGGCTGCCACGTGGAATTGCTCTTCCTCCGCTACATCTCGGACTGGGACCTAGACCCT 60

Qy         61 GGCCGCTGCTACCGCGTCACCTGGTTCACCTCCTGGAGCCCCTGCTACGACTGTGCCCGA 120
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db         61 GGCCGCTGCTACCGCGTCACCTGGTTCACCTCCTGGAGCCCCTGCTACGACTGTGCCCGA 120

Qy        121 CATGTGGCCGACTTTCTGCGAGGGAACCCCAACCTCAGTCTGAGGATCTTCACCGCGCGC 180
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        121 CATGTGGCCGACTTTCTGCGAGGGAACCCCAACCTCAGTCTGAGGATCTTCACCGCGCGC 180

Qy        181 CTCTACTTCTGTGAGGACCGCAAGGCTGAGCCCGAGGGGCTGCGGCGGCTGCACCGCGCC 240
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        181 CTCTACTTCTGTGAGGACCGCAAGGCTGAGCCCGAGGGGCTGCGGCGGCTGCACCGCGCC 240

Qy        241 GGGGTGCAAATAGCCATCATGACCTTCAAAG 271
              |||||||||||||||||||||||||||||||
Db        241 GGGGTGCAAATAGCCATCATGACCTTCAAAG 271


RESULT 2
US-09-966-880A-10
; Sequence 10, Application US/09966880A
; GENERAL INFORMATION:
;  APPLICANT: Honjo, Tasuku
;  APPLICANT:  Muramatsu, Masamichi
;  TITLE OF INVENTION: NOVEL CYTIDINE DEAMINASE
;  FILE REFERENCE: 06501-088001
;  CURRENT APPLICATION NUMBER: US/09/966,880A
;  CURRENT FILING DATE:  2001-09-28
;  PRIOR APPLICATION NUMBER: PCT/JP00/01918
;  PRIOR FILING DATE: 2000-03-28
;  PRIOR APPLICATION NUMBER: JP 11-371382
;  PRIOR FILING DATE: 1999-12-27
;  PRIOR APPLICATION NUMBER: JP 11-178999
;  PRIOR FILING DATE: 1999-06-24
;  PRIOR APPLICATION NUMBER: JP 11-87192
;  PRIOR FILING DATE: 1999-03-29
;  NUMBER OF SEQ ID NOS: 36
;  SOFTWARE: FastSEQ for Windows Version 4.0
; SEQ ID NO 10
;   LENGTH: 6564
;   TYPE: DNA
;   ORGANISM: Homo sapiens
US-09-966-880A-10

  Query Match             100.0%;  Score 271;  DB 1;  Length 6564;
  Best Local Similarity   100.0%;  Pred. No. 0.03;
  Matches  271;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 AACGGCTGCCACGTGGAATTGCTCTTCCTCCGCTACATCTCGGACTGGGACCTAGACCCT 60
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db       2592 AACGGCTGCCACGTGGAATTGCTCTTCCTCCGCTACATCTCGGACTGGGACCTAGACCCT 2651

Qy         61 GGCCGCTGCTACCGCGTCACCTGGTTCACCTCCTGGAGCCCCTGCTACGACTGTGCCCGA 120
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db       2652 GGCCGCTGCTACCGCGTCACCTGGTTCACCTCCTGGAGCCCCTGCTACGACTGTGCCCGA 2711

Qy        121 CATGTGGCCGACTTTCTGCGAGGGAACCCCAACCTCAGTCTGAGGATCTTCACCGCGCGC 180
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db       2712 CATGTGGCCGACTTTCTGCGAGGGAACCCCAACCTCAGTCTGAGGATCTTCACCGCGCGC 2771

Qy        181 CTCTACTTCTGTGAGGACCGCAAGGCTGAGCCCGAGGGGCTGCGGCGGCTGCACCGCGCC 240
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db       2772 CTCTACTTCTGTGAGGACCGCAAGGCTGAGCCCGAGGGGCTGCGGCGGCTGCACCGCGCC 2831

Qy        241 GGGGTGCAAATAGCCATCATGACCTTCAAAG 271
              |||||||||||||||||||||||||||||||
Db       2832 GGGGTGCAAATAGCCATCATGACCTTCAAAG 2862


RESULT 3
US-09-966-880A-10/c
; Sequence 10, Application US/09966880A
; GENERAL INFORMATION:
;  APPLICANT: Honjo, Tasuku
;  APPLICANT:  Muramatsu, Masamichi
;  TITLE OF INVENTION: NOVEL CYTIDINE DEAMINASE
;  FILE REFERENCE: 06501-088001
;  CURRENT APPLICATION NUMBER: US/09/966,880A
;  CURRENT FILING DATE:  2001-09-28
;  PRIOR APPLICATION NUMBER: PCT/JP00/01918
;  PRIOR FILING DATE: 2000-03-28
;  PRIOR APPLICATION NUMBER: JP 11-371382
;  PRIOR FILING DATE: 1999-12-27
;  PRIOR APPLICATION NUMBER: JP 11-178999
;  PRIOR FILING DATE: 1999-06-24
;  PRIOR APPLICATION NUMBER: JP 11-87192
;  PRIOR FILING DATE: 1999-03-29
;  NUMBER OF SEQ ID NOS: 36
;  SOFTWARE: FastSEQ for Windows Version 4.0
; SEQ ID NO 10
;   LENGTH: 6564
;   TYPE: DNA
;   ORGANISM: Homo sapiens
US-09-966-880A-10

  Query Match              7.6%;  Score 20.6;  DB 1;  Length 6564;
  Best Local Similarity   51.6%;  Pred. No. 1.8;
  Matches   47;  Conservative    0;  Mismatches   44;  Indels    0;  Gaps    0;

Qy        173 CCGCGCGCCTCTACTTCTGTGAGGACCGCAAGGCTGAGCCCGAGGGGCTGCGGCGGCTGC 232
              ||   |||  ||       || | ||  || |     | ||||  | | |||| || || ||
Db       2872 CCTTTCGCACCTTTGAAGGTCATGATGGCTATTTGCACCCCGGCGCGGTGCAGCCGCCGC 2813

Qy        233 ACCGCGCCGGGGGTGCAAATAGCCATCATGAC 263
              | | |  |||| |     | ||  || | ||
Db       2812 AGCCCCTCGGGCTCAGCCTTGCGGTCCTCAC 2782
```

```
RESULT 4
US-09-966-880A-13/c
; Sequence 13, Application US/09966880A
; GENERAL INFORMATION:
;  APPLICANT: Honjo, Tasuku
;  APPLICANT:  Muramatsu, Masamichi
;  TITLE OF INVENTION: NOVEL CYTIDINE DEAMINASE
;  FILE REFERENCE: 06501-088001
;  CURRENT APPLICATION NUMBER: US/09/966,880A
;  CURRENT FILING DATE:  2001-09-28
;  PRIOR APPLICATION NUMBER: PCT/JP00/01918
;  PRIOR FILING DATE: 2000-03-28
;  PRIOR APPLICATION NUMBER: JP 11-371382
;  PRIOR FILING DATE: 1999-12-27
;  PRIOR APPLICATION NUMBER: JP 11-178999
;  PRIOR FILING DATE: 1999-06-24
;  PRIOR APPLICATION NUMBER: JP 11-87192
;  PRIOR FILING DATE: 1999-03-29
;  NUMBER OF SEQ ID NOS: 36
;  SOFTWARE: FastSEQ for Windows Version 4.0
; SEQ ID NO 13
;   LENGTH: 271
;   TYPE: DNA
;   ORGANISM: Homo sapiens
US-09-966-880A-13

  Query Match             7.5%;  Score 20.2;  DB 1;  Length 271;
  Best Local Similarity   54.8%;  Pred. No. 42;
  Matches   40;  Conservative    0;  Mismatches   33;  Indels    0;  Gaps    0;

Qy        191 GTGAGGACCGCAAGGCTGAGCCCGAGGGGCTGCGGCGGCTGCACCGCGCCGGGGGTGCAAA 250
              || | ||  || |     | ||||  | | ||| || || ||| | |  |||| |
Db        263 GTCATGATGGCTATTTGCACCCCGGCGCGGTGCAGCCGCCGCAGCCCCTCGGGCTCAGCC 204

Qy        251 TAGCCATCATGAC 263
              | ||  || | ||
Db        203 TTGCGGTCCTCAC 191


RESULT 5
US-09-966-880A-9/c
; Sequence 9, Application US/09966880A
; GENERAL INFORMATION:
;  APPLICANT: Honjo, Tasuku
;  APPLICANT:  Muramatsu, Masamichi
;  TITLE OF INVENTION: NOVEL CYTIDINE DEAMINASE
;  FILE REFERENCE: 06501-088001
;  CURRENT APPLICATION NUMBER: US/09/966,880A
;  CURRENT FILING DATE:  2001-09-28
;  PRIOR APPLICATION NUMBER: PCT/JP00/01918
;  PRIOR FILING DATE: 2000-03-28
;  PRIOR APPLICATION NUMBER: JP 11-371382
;  PRIOR FILING DATE: 1999-12-27
;  PRIOR APPLICATION NUMBER: JP 11-178999
;  PRIOR FILING DATE: 1999-06-24
;  PRIOR APPLICATION NUMBER: JP 11-87192
;  PRIOR FILING DATE: 1999-03-29
;  NUMBER OF SEQ ID NOS: 36
;  SOFTWARE: FastSEQ for Windows Version 4.0
; SEQ ID NO 9
;   LENGTH: 5514
;   TYPE: DNA
;   ORGANISM: Homo sapiens
;   FEATURE:
;   NAME/KEY: intron
;   LOCATION: (1)...(1031)
;   FEATURE:
;   NAME/KEY: exon
;   LOCATION: (1032)...(1118)
;   FEATURE:
;   NAME/KEY: intron
;   LOCATION: (1119)...(5514)
US-09-966-880A-9

  Query Match             6.5%;  Score 17.6;  DB 1;  Length 5514;
  Best Local Similarity   52.8%;  Pred. No. 2.3;
  Matches   38;  Conservative    0;  Mismatches   34;  Indels    0;  Gaps    0;

Qy         31 CGCTACATCTCGGACTGGGACCTAGACCCTGGCCGCTGCTACCGCGTCACCTGGTTCACC 90
              | || ||  |   | |  || || | || |    ||| || ||  | || |     | ||
Db       1008 CCCTTCACATTCAAATTTGAGCTTGCCCTTTTGGGCTCCTCCCCTGACAGCATCACCCCC 949

Qy         91 TCCTGGAGCCCC 102
              || ||  ||||
Db        948 ACCAGGTACCCC 937


RESULT 6
US-09-966-880A-9
; Sequence 9, Application US/09966880A
; GENERAL INFORMATION:
;  APPLICANT: Honjo, Tasuku
;  APPLICANT:  Muramatsu, Masamichi
;  TITLE OF INVENTION: NOVEL CYTIDINE DEAMINASE
;  FILE REFERENCE: 06501-088001
;  CURRENT APPLICATION NUMBER: US/09/966,880A
;  CURRENT FILING DATE:  2001-09-28
;  PRIOR APPLICATION NUMBER: PCT/JP00/01918
;  PRIOR FILING DATE: 2000-03-28
;  PRIOR APPLICATION NUMBER: JP 11-371382
;  PRIOR FILING DATE: 1999-12-27
;  PRIOR APPLICATION NUMBER: JP 11-178999
;  PRIOR FILING DATE: 1999-06-24
;  PRIOR APPLICATION NUMBER: JP 11-87192
;  PRIOR FILING DATE: 1999-03-29
;  NUMBER OF SEQ ID NOS: 36
;  SOFTWARE: FastSEQ for Windows Version 4.0
; SEQ ID NO 9
;   LENGTH: 5514
;   TYPE: DNA
;   ORGANISM: Homo sapiens
;   FEATURE:
;   NAME/KEY: intron
;   LOCATION: (1)...(1031)
;   FEATURE:
;   NAME/KEY: exon
;   LOCATION: (1032)...(1118)
;   FEATURE:
;   NAME/KEY: intron
;   LOCATION: (1119)...(5514)
US-09-966-880A-9

  Query Match             5.9%;  Score 16;  DB 1;  Length 5514;
  Best Local Similarity   55.4%;  Pred. No. 2.3;
  Matches   31;  Conservative    0;  Mismatches   25;  Indels    0;  Gaps    0;

Qy         36 CATCTCGGACTGGGACCTAGACCCTGGCCGCTGCTACCGCGTCACCTGGTTCACCT 91
              || |   | ||||   |||   |||||||   || | |       |||||  | |||
Db       2023 CAGCCGAGGCTGGTCTCTAAGTCCTGGCCCAAGCGATCCTCCTGCCTGGGCCTCCT 2078


RESULT 7
US-09-966-880A-12/c
; Sequence 12, Application US/09966880A
; GENERAL INFORMATION:
;  APPLICANT: Honjo, Tasuku
;  APPLICANT:  Muramatsu, Masamichi
;  TITLE OF INVENTION: NOVEL CYTIDINE DEAMINASE
;  FILE REFERENCE: 06501-088001
;  CURRENT APPLICATION NUMBER: US/09/966,880A
;  CURRENT FILING DATE:  2001-09-28
;  PRIOR APPLICATION NUMBER: PCT/JP00/01918
;  PRIOR FILING DATE: 2000-03-28
;  PRIOR APPLICATION NUMBER: JP 11-371382
```

```
;  PRIOR FILING DATE: 1999-12-27
;  PRIOR APPLICATION NUMBER: JP 11-178999
;  PRIOR FILING DATE: 1999-06-24
;  PRIOR APPLICATION NUMBER: JP 11-87192
;  PRIOR FILING DATE: 1999-03-29
;  NUMBER OF SEQ ID NOS: 36
;  SOFTWARE: FastSEQ for Windows Version 4.0
; SEQ ID NO 12
;   LENGTH: 148
;   TYPE: DNA
;   ORGANISM: Homo sapiens
US-09-966-880A-12

  Query Match             5.1%;  Score 13.8;  DB 1;  Length 148;
  Best Local Similarity   49.3%;  Pred. No. 84;
  Matches   36;  Conservative    0;  Mismatches   37;  Indels    0;  Gaps    0;

Qy        132 CTTTCTGCGAGGGAACCCCAACCTCAGTCTGAGGATCTTCACCGCGCGCCTCTACTTCTG 191
              |||  ||||| |  | || ||   ||||   | |    |  |   |   | |  ||||
Db        148 CTTATTGCGAAGATAACCAAAGTCCAGTGAAAAGGATGTAGCACTGTCACGCCTCTTCAC 89

Qy        192 TGAGGACCGCAAG 204
              |  | | | || |
Db         88 TACGTAGCACAGG 76


RESULT 8
US-09-966-880A-15/c
; Sequence 15, Application US/09966880A
; GENERAL INFORMATION:
;  APPLICANT: Honjo, Tasuku
;  APPLICANT:  Muramatsu, Masamichi
;  TITLE OF INVENTION: NOVEL CYTIDINE DEAMINASE
;  FILE REFERENCE: 06501-088001
;  CURRENT APPLICATION NUMBER: US/09/966,880A
;  CURRENT FILING DATE:  2001-09-28
;  PRIOR APPLICATION NUMBER: PCT/JP00/01918
;  PRIOR FILING DATE: 2000-03-28
;  PRIOR APPLICATION NUMBER: JP 11-371382
;  PRIOR FILING DATE: 1999-12-27
;  PRIOR APPLICATION NUMBER: JP 11-178999
;  PRIOR FILING DATE: 1999-06-24
;  PRIOR APPLICATION NUMBER: JP 11-87192
;  PRIOR FILING DATE: 1999-03-29
;  NUMBER OF SEQ ID NOS: 36
;  SOFTWARE: FastSEQ for Windows Version 4.0
; SEQ ID NO 15
;   LENGTH: 2172
;   TYPE: DNA
;   ORGANISM: Homo sapiens
US-09-966-880A-15

  Query Match             4.9%;  Score 13.4;  DB 1;  Length 2172;
  Best Local Similarity   52.7%;  Pred. No. 6;
  Matches   29;  Conservative    0;  Mismatches   26;  Indels    0;  Gaps    0;

Qy         33 CTACATCTCGGACTGGGACCTAGACCCTGGCCGCTGCTACCGCGTCACCTGGTTC 87
              ||| |  ||  |     || | ||| ||    | |||| ||  |||     ||||
Db        361 CTAAAAGTCATAGAAAAACGTTGACACTTTAGGATGCTCCCAGGTCCTGCAGTTC 307


RESULT 9
US-09-966-880A-12
; Sequence 12, Application US/09966880A
; GENERAL INFORMATION:
;  APPLICANT: Honjo, Tasuku
;  APPLICANT:  Muramatsu, Masamichi
;  TITLE OF INVENTION: NOVEL CYTIDINE DEAMINASE
;  FILE REFERENCE: 06501-088001
;  CURRENT APPLICATION NUMBER: US/09/966,880A
;  CURRENT FILING DATE:  2001-09-28
;  PRIOR APPLICATION NUMBER: PCT/JP00/01918
;  PRIOR FILING DATE: 2000-03-28
;  PRIOR APPLICATION NUMBER: JP 11-371382
;  PRIOR FILING DATE: 1999-12-27
;  PRIOR APPLICATION NUMBER: JP 11-178999
;  PRIOR FILING DATE: 1999-06-24
;  PRIOR APPLICATION NUMBER: JP 11-87192
;  PRIOR FILING DATE: 1999-03-29
;  NUMBER OF SEQ ID NOS: 36
;  SOFTWARE: FastSEQ for Windows Version 4.0
; SEQ ID NO 12
;   LENGTH: 148
;   TYPE: DNA
;   ORGANISM: Homo sapiens
US-09-966-880A-12

  Query Match             4.6%;  Score 12.6;  DB 1;  Length 148;
  Best Local Similarity   66.7%;  Pred. No. 85;
  Matches   18;  Conservative    0;  Mismatches    9;  Indels    0;  Gaps    0;

Qy         28 CTCCGCTACATCTCGGACTGGGACCTA 54
              ||  ||||     ||||  || ||||||
Db         49 CTGGGCTAAGGGTCGGCGTGAGACCTA 75


RESULT 10
US-09-966-880A-15
; Sequence 15, Application US/09966880A
; GENERAL INFORMATION:
;  APPLICANT: Honjo, Tasuku
;  APPLICANT:  Muramatsu, Masamichi
;  TITLE OF INVENTION: NOVEL CYTIDINE DEAMINASE
;  FILE REFERENCE: 06501-088001
;  CURRENT APPLICATION NUMBER: US/09/966,880A
;  CURRENT FILING DATE:  2001-09-28
;  PRIOR APPLICATION NUMBER: PCT/JP00/01918
;  PRIOR FILING DATE: 2000-03-28
;  PRIOR APPLICATION NUMBER: JP 11-371382
;  PRIOR FILING DATE: 1999-12-27
;  PRIOR APPLICATION NUMBER: JP 11-178999
;  PRIOR FILING DATE: 1999-06-24
;  PRIOR APPLICATION NUMBER: JP 11-87192
;  PRIOR FILING DATE: 1999-03-29
;  NUMBER OF SEQ ID NOS: 36
;  SOFTWARE: FastSEQ for Windows Version 4.0
; SEQ ID NO 15
;   LENGTH: 2172
;   TYPE: DNA
;   ORGANISM: Homo sapiens
US-09-966-880A-15

  Query Match             4.4%;  Score 12;  DB 1;  Length 2172;
  Best Local Similarity   48.5%;  Pred. No. 6.1;
  Matches   33;  Conservative    0;  Mismatches   35;  Indels    0;  Gaps    0;

Qy         87 CACCTCCTGGAGCCCCTGCTACGACTGTGCCCGACATGTGGCCGACTTTCTGCGAGGGAA 146
              | | |||   || || || |     |  | |   ||| |     ||   ||   | ||
Db        522 CTCTTCCATCAGGCCATGATCTATAGGACCTCCTAATGAGAGTATCTGGGTGATTGTGAC 581

Qy        147 CCCCAACC 154
              ||| ||||
Db        582 CCCAAACC 589


RESULT 11
US-09-966-880A-11
; Sequence 11, Application US/09966880A
; GENERAL INFORMATION:
;  APPLICANT: Honjo, Tasuku
;  APPLICANT:  Muramatsu, Masamichi
;  TITLE OF INVENTION: NOVEL CYTIDINE DEAMINASE
;  FILE REFERENCE: 06501-088001
;  CURRENT APPLICATION NUMBER: US/09/966,880A
;  CURRENT FILING DATE:  2001-09-28
;  PRIOR APPLICATION NUMBER: PCT/JP00/01918
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;  PRIOR FILING DATE: 2000-03-28
;  PRIOR APPLICATION NUMBER: JP 11-371382
;  PRIOR FILING DATE: 1999-12-27
;  PRIOR APPLICATION NUMBER: JP 11-178999
;  PRIOR FILING DATE: 1999-06-24
;  PRIOR APPLICATION NUMBER: JP 11-87192
;  PRIOR FILING DATE: 1999-03-29
;  NUMBER OF SEQ ID NOS: 36
;  SOFTWARE: FastSEQ for Windows Version 4.0
; SEQ ID NO 11
;   LENGTH: 87
;   TYPE: DNA
;   ORGANISM: Homo sapiens
US-09-966-880A-11

  Query Match             4.3%;  Score 11.6;  DB 1;  Length 87;
  Best Local Similarity   54.8%;  Pred. No. 1.5e+02;
  Matches   23;  Conservative    0;  Mismatches   19;  Indels    0;  Gaps    0;

Qy        227 GGCTGCACCGCGCCGGGGTGCAAATAGCCATCATGACCTTCA 268
              | |||    |  || |||  ||||  || ||   ||  |  ||
Db         36 GCCTGAGACTTGCAGGGAGGCAAGAAGACACTCTGGACACCA 77


RESULT 12
US-09-966-880A-11/c
; Sequence 11, Application US/09966880A
; GENERAL INFORMATION:
;  APPLICANT: Honjo, Tasuku
;  APPLICANT:  Muramatsu, Masamichi
;  TITLE OF INVENTION: NOVEL CYTIDINE DEAMINASE
;  FILE REFERENCE: 06501-088001
;  CURRENT APPLICATION NUMBER: US/09/966,880A
;  CURRENT FILING DATE:  2001-09-28
;  PRIOR APPLICATION NUMBER: PCT/JP00/01918
;  PRIOR FILING DATE: 2000-03-28
;  PRIOR APPLICATION NUMBER: JP 11-371382
;  PRIOR FILING DATE: 1999-12-27
;  PRIOR APPLICATION NUMBER: JP 11-178999
;  PRIOR FILING DATE: 1999-06-24
;  PRIOR APPLICATION NUMBER: JP 11-87192
;  PRIOR FILING DATE: 1999-03-29
;  NUMBER OF SEQ ID NOS: 36
;  SOFTWARE: FastSEQ for Windows Version 4.0
; SEQ ID NO 11
;   LENGTH: 87
;   TYPE: DNA
;   ORGANISM: Homo sapiens
US-09-966-880A-11

  Query Match             3.8%;  Score 10.4;  DB 1;  Length 87;
  Best Local Similarity   60.7%;  Pred. No. 1.5e+02;
  Matches   17;  Conservative    0;  Mismatches   11;  Indels    0;  Gaps    0;

Qy        186 CTTCTGTGAGGACCGCAAGGCTGAGCCC 213
              |||||        | ||||| || || ||
Db         62 CTTCTTGCCTCCCTGCAAGTCTCAGGCC 35


RESULT 13
US-09-966-880A-14/c
; Sequence 14, Application US/09966880A
; GENERAL INFORMATION:
;  APPLICANT: Honjo, Tasuku
;  APPLICANT:  Muramatsu, Masamichi
;  TITLE OF INVENTION: NOVEL CYTIDINE DEAMINASE
;  FILE REFERENCE: 06501-088001
;  CURRENT APPLICATION NUMBER: US/09/966,880A
;  CURRENT FILING DATE:  2001-09-28
;  PRIOR APPLICATION NUMBER: PCT/JP00/01918
;  PRIOR FILING DATE: 2000-03-28
;  PRIOR APPLICATION NUMBER: JP 11-371382
;  PRIOR FILING DATE: 1999-12-27
;  PRIOR APPLICATION NUMBER: JP 11-178999
;  PRIOR FILING DATE: 1999-06-24
;  PRIOR APPLICATION NUMBER: JP 11-87192
;  PRIOR FILING DATE: 1999-03-29
;  NUMBER OF SEQ ID NOS: 36
;  SOFTWARE: FastSEQ for Windows Version 4.0
; SEQ ID NO 14
;   LENGTH: 116
;   TYPE: DNA
;   ORGANISM: Homo sapiens
US-09-966-880A-14

  Query Match             3.7%;  Score 10;  DB 1;  Length 116;
  Best Local Similarity   52.4%;  Pred. No. 1.1e+02;
  Matches   22;  Conservative    0;  Mismatches   20;  Indels    0;  Gaps    0;

Qy        228 GCTGCACCGCGCCGGGGTGCAAATAGCCATCATGACCTTCAA 269
              || || |  | | ||  |  |||   |  || ||   ||| |
Db         69 GCAGCCCTTCCCAGGCTTTGAAAGTTCTTTCGTGGTTTTCTA 28


RESULT 14
US-09-966-880A-14
; Sequence 14, Application US/09966880A
; GENERAL INFORMATION:
;  APPLICANT: Honjo, Tasuku
;  APPLICANT:  Muramatsu, Masamichi
;  TITLE OF INVENTION: NOVEL CYTIDINE DEAMINASE
;  FILE REFERENCE: 06501-088001
;  CURRENT APPLICATION NUMBER: US/09/966,880A
;  CURRENT FILING DATE:  2001-09-28
;  PRIOR APPLICATION NUMBER: PCT/JP00/01918
;  PRIOR FILING DATE: 2000-03-28
;  PRIOR APPLICATION NUMBER: JP 11-371382
;  PRIOR FILING DATE: 1999-12-27
;  PRIOR APPLICATION NUMBER: JP 11-178999
;  PRIOR FILING DATE: 1999-06-24
;  PRIOR APPLICATION NUMBER: JP 11-87192
;  PRIOR FILING DATE: 1999-03-29
;  NUMBER OF SEQ ID NOS: 36
;  SOFTWARE: FastSEQ for Windows Version 4.0
; SEQ ID NO 14
;   LENGTH: 116
;   TYPE: DNA
;   ORGANISM: Homo sapiens
US-09-966-880A-14

  Query Match             3.2%;  Score 8.8;  DB 1;  Length 116;
  Best Local Similarity   57.1%;  Pred. No. 1.1e+02;
  Matches   16;  Conservative    0;  Mismatches   12;  Indels    0;  Gaps    0;

Qy        244 GTGCAAATAGCCATCATGACCTTCAAAG 271
              ||  |||    |   |  || |||||||
Db         27 GTAGAAAACCACGAAAGAACTTTCAAAG 54


Search completed: March 10, 2004, 13:40:48
Job time : 3.31421 secs

                                GenCore version 5.1.6
                  Copyright (c) 1993 - 2004  Compugen Ltd.


OM nucleic - nucleic search, using sw model

Run on:         March 10, 2004, 13:38:36 ; Search time 0.990586 Seconds
                                           (without alignments)
                                           3.483 Million cell updates/sec


Title:          US-09-966-880A-14
Perfect score:  116
Sequence:       1 attatttttactgctggaat.....agcttcggcgcatccttttg 116
```

Scoring table: IDENTITY_NUC
Gapop 10.0 , Gapext 0.5

Searched: 7 seqs, 14872 residues

Total number of hits satisfying chosen parameters: 14

Minimum DB seq length: 0
Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries

Database : US09966880A.seq:*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.		Score	% Query Match	Length	DB	ID	Description
1		116	100.0	116	1	US-09-966-880A-14	Sequence 14, Appl
2		116	100.0	6564	1	US-09-966-880A-10	Sequence 10, Appl
3	c	17	14.7	6564	1	US-09-966-880A-10	Sequence 10, Appl
4		16.2	14.0	5514	1	US-09-966-880A-9	Sequence 9, Appli
5	c	16	13.8	2172	1	US-09-966-880A-15	Sequence 15, Appl
6	c	14.8	12.8	5514	1	US-09-966-880A-9	Sequence 9, Appli
7		13.8	11.9	2172	1	US-09-966-880A-15	Sequence 15, Appl
8	c	13.4	11.6	148	1	US-09-966-880A-12	Sequence 12, Appl
9	c	10.8	9.3	116	1	US-09-966-880A-14	Sequence 14, Appl
10	c	10	8.6	271	1	US-09-966-880A-13	Sequence 13, Appl
11		9.6	8.3	87	1	US-09-966-880A-11	Sequence 11, Appl
12		9	7.8	148	1	US-09-966-880A-12	Sequence 12, Appl
13		8.8	7.6	271	1	US-09-966-880A-13	Sequence 13, Appl
14	c	8.4	7.2	87	1	US-09-966-880A-11	Sequence 11, Appl

ALIGNMENTS

RESULT 1
US-09-966-880A-14
; Sequence 14, Application US/09966880A
; GENERAL INFORMATION:
; APPLICANT: Honjo, Tasuku
; APPLICANT: Muramatsu, Masamichi
; TITLE OF INVENTION: NOVEL CYTIDINE DEAMINASE
; FILE REFERENCE: 06501-088001
; CURRENT APPLICATION NUMBER: US/09/966,880A
; CURRENT FILING DATE: 2001-09-28
; PRIOR APPLICATION NUMBER: PCT/JP00/01918
; PRIOR FILING DATE: 2000-03-28
; PRIOR APPLICATION NUMBER: JP 11-371382
; PRIOR FILING DATE: 1999-12-27
; PRIOR APPLICATION NUMBER: JP 11-178999
; PRIOR FILING DATE: 1999-06-24
; PRIOR APPLICATION NUMBER: JP 11-87192
; PRIOR FILING DATE: 1999-03-29
; NUMBER OF SEQ ID NOS: 36
; SOFTWARE: FastSEQ for Windows Version 4.0
; SEQ ID NO 14
; LENGTH: 116
; TYPE: DNA
; ORGANISM: Homo sapiens
US-09-966-880A-14

Query Match 100.0%; Score 116; DB 1; Length 116;
Best Local Similarity 100.0%; Pred. No. 1.2;
Matches 116; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

```
Qy          1 ATTATTTTTACTGCTGGAATACTTTTGTAGAAAACCACGAAAGAACTTTCAAAGCCTGGG 60
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db          1 ATTATTTTTACTGCTGGAATACTTTTGTAGAAAACCACGAAAGAACTTTCAAAGCCTGGG 60

Qy         61 AAGGGCTGCATGAAAATTCAGTTCGTCTCTCCAGACAGCTTCGGCGCATCCTTTTG 116
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db         61 AAGGGCTGCATGAAAATTCAGTTCGTCTCTCCAGACAGCTTCGGCGCATCCTTTTG 116
```

RESULT 2
US-09-966-880A-10
; Sequence 10, Application US/09966880A
; GENERAL INFORMATION:
; APPLICANT: Honjo, Tasuku
; APPLICANT: Muramatsu, Masamichi
; TITLE OF INVENTION: NOVEL CYTIDINE DEAMINASE
; FILE REFERENCE: 06501-088001
; CURRENT APPLICATION NUMBER: US/09/966,880A
; CURRENT FILING DATE: 2001-09-28
; PRIOR APPLICATION NUMBER: PCT/JP00/01918
; PRIOR FILING DATE: 2000-03-28
; PRIOR APPLICATION NUMBER: JP 11-371382
; PRIOR FILING DATE: 1999-12-27
; PRIOR APPLICATION NUMBER: JP 11-178999
; PRIOR FILING DATE: 1999-06-24
; PRIOR APPLICATION NUMBER: JP 11-87192
; PRIOR FILING DATE: 1999-03-29
; NUMBER OF SEQ ID NOS: 36
; SOFTWARE: FastSEQ for Windows Version 4.0
; SEQ ID NO 10
; LENGTH: 6564
; TYPE: DNA
; ORGANISM: Homo sapiens
US-09-966-880A-10

Query Match 100.0%; Score 116; DB 1; Length 6564;
Best Local Similarity 100.0%; Pred. No. 0.03;
Matches 116; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

```
Qy          1 ATTATTTTTACTGCTGGAATACTTTTGTAGAAAACCACGAAAGAACTTTCAAAGCCTGGG 60
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db       3156 ATTATTTTTACTGCTGGAATACTTTTGTAGAAAACCACGAAAGAACTTTCAAAGCCTGGG 3215

Qy         61 AAGGGCTGCATGAAAATTCAGTTCGTCTCTCCAGACAGCTTCGGCGCATCCTTTTG 116
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db       3216 AAGGGCTGCATGAAAATTCAGTTCGTCTCTCCAGACAGCTTCGGCGCATCCTTTTG 3271
```

RESULT 3
US-09-966-880A-10/c
; Sequence 10, Application US/09966880A
; GENERAL INFORMATION:
; APPLICANT: Honjo, Tasuku
; APPLICANT: Muramatsu, Masamichi
; TITLE OF INVENTION: NOVEL CYTIDINE DEAMINASE
; FILE REFERENCE: 06501-088001
; CURRENT APPLICATION NUMBER: US/09/966,880A
; CURRENT FILING DATE: 2001-09-28
; PRIOR APPLICATION NUMBER: PCT/JP00/01918
; PRIOR FILING DATE: 2000-03-28
; PRIOR APPLICATION NUMBER: JP 11-371382
; PRIOR FILING DATE: 1999-12-27
; PRIOR APPLICATION NUMBER: JP 11-178999
; PRIOR FILING DATE: 1999-06-24
; PRIOR APPLICATION NUMBER: JP 11-87192
; PRIOR FILING DATE: 1999-03-29
; NUMBER OF SEQ ID NOS: 36
; SOFTWARE: FastSEQ for Windows Version 4.0
; SEQ ID NO 10
; LENGTH: 6564
; TYPE: DNA
; ORGANISM: Homo sapiens

```
US-09-966-880A-10

  Query Match             14.7%;  Score 17;  DB 1;  Length 6564;
  Best Local Similarity   52.1%;  Pred. No. 1.9;
  Matches   38;  Conservative    0;  Mismatches   35;  Indels    0;  Gaps    0;

Qy          4 ATTTTTACTGCTGGAATACTTTTGTAGAAAACCACGAAAGAACTTTCAAAGCCTGGGAAG 63
              | | || | || | || | | | | |||| | ||| |      |||| | ||||
Db       3178 AGTATTCCAGCAGTAAAAATAATCTTCAAAAAAAAAAAAAAAGGAAAAAAAGGCGGGGATA 3119

Qy         64 GGCTGCATGAAAA 76
                | |  ||| |
Db       3118 TGGGGGTAGAAGA 3106


RESULT 4
US-09-966-880A-9
; Sequence 9, Application US/09966880A
; GENERAL INFORMATION:
;  APPLICANT: Honjo, Tasuku
;  APPLICANT:  Muramatsu, Masamichi
;  TITLE OF INVENTION: NOVEL CYTIDINE DEAMINASE
;  FILE REFERENCE: 06501-088001
;  CURRENT APPLICATION NUMBER: US/09/966,880A
;  CURRENT FILING DATE:  2001-09-28
;  PRIOR APPLICATION NUMBER: PCT/JP00/01918
;  PRIOR FILING DATE: 2000-03-28
;  PRIOR APPLICATION NUMBER: JP 11-371382
;  PRIOR FILING DATE: 1999-12-27
;  PRIOR APPLICATION NUMBER: JP 11-178999
;  PRIOR FILING DATE: 1999-06-24
;  PRIOR APPLICATION NUMBER: JP 11-87192
;  PRIOR FILING DATE: 1999-03-29
;  NUMBER OF SEQ ID NOS: 36
;  SOFTWARE: FastSEQ for Windows Version 4.0
; SEQ ID NO 9
;   LENGTH: 5514
;   TYPE: DNA
;   ORGANISM: Homo sapiens
;   FEATURE:
;   NAME/KEY: intron
;   LOCATION: (1)...(1031)
;   FEATURE:
;   NAME/KEY: exon
;   LOCATION: (1032)...(1118)
;   FEATURE:
;   NAME/KEY: intron
;   LOCATION: (1119)...(5514)
US-09-966-880A-9

  Query Match             14.0%;  Score 16.2;  DB 1;  Length 5514;
  Best Local Similarity   52.2%;  Pred. No. 2.3;
  Matches   36;  Conservative    0;  Mismatches   33;  Indels    0;  Gaps    0;

Qy         30 GAAAACCACGAAAGAACTTTCAAAGCCTGGGAAGGGCTGCATGAAAATTCAGTTCGTCTC 89
              |||    |   |||||      ||   ||||   ||   |  ||   |||||| |  | |
Db       4437 GAAGGACTGCAAAGAGGGAAGAAGCTCTGGTGGGGTGAGGGTGGTGATTCAGGTTCTGTA 4496

Qy         90 TCCAGACAG 98
              ||| ||| |
Db       4497 TCCTGACTG 4505


RESULT 5
US-09-966-880A-15/c
; Sequence 15, Application US/09966880A
; GENERAL INFORMATION:
;  APPLICANT: Honjo, Tasuku
;  APPLICANT:  Muramatsu, Masamichi
;  TITLE OF INVENTION: NOVEL CYTIDINE DEAMINASE
;  FILE REFERENCE: 06501-088001
;  CURRENT APPLICATION NUMBER: US/09/966,880A
;  CURRENT FILING DATE:  2001-09-28
;  PRIOR APPLICATION NUMBER: PCT/JP00/01918
;  PRIOR FILING DATE: 2000-03-28
;  PRIOR APPLICATION NUMBER: JP 11-371382
;  PRIOR FILING DATE: 1999-12-27
;  PRIOR APPLICATION NUMBER: JP 11-178999
;  PRIOR FILING DATE: 1999-06-24
;  PRIOR APPLICATION NUMBER: JP 11-87192
;  PRIOR FILING DATE: 1999-03-29
;  NUMBER OF SEQ ID NOS: 36
;  SOFTWARE: FastSEQ for Windows Version 4.0
; SEQ ID NO 15
;   LENGTH: 2172
;   TYPE: DNA
;   ORGANISM: Homo sapiens
US-09-966-880A-15

  Query Match             13.8%;  Score 16;  DB 1;  Length 2172;
  Best Local Similarity   50.0%;  Pred. No. 5.5;
  Matches   40;  Conservative    0;  Mismatches   40;  Indels    0;  Gaps    0;

Qy          7 TTTACTGCTGGAATACTTTTGTAGAAAACCACGAAAGAACTTTCAAAGCCTGGGAAGGGC 66
              ||| |||    || | ||| || ||| | | |  ||     ||| |||       | ||
Db       2032 TTTGCTGTCATAAAAGTTTACTAAAAATCAAGAGAAATGGCTTCGTAGCACCATTACTGC 1973

Qy         67 TGCATGAAAATTCAGTTCGT 86
                | | ||||   | |||
Db       1972 AATGTTACAATTACATACGT 1953


RESULT 6
US-09-966-880A-9/c
; Sequence 9, Application US/09966880A
; GENERAL INFORMATION:
;  APPLICANT: Honjo, Tasuku
;  APPLICANT:  Muramatsu, Masamichi
;  TITLE OF INVENTION: NOVEL CYTIDINE DEAMINASE
;  FILE REFERENCE: 06501-088001
;  CURRENT APPLICATION NUMBER: US/09/966,880A
;  CURRENT FILING DATE:  2001-09-28
;  PRIOR APPLICATION NUMBER: PCT/JP00/01918
;  PRIOR FILING DATE: 2000-03-28
;  PRIOR APPLICATION NUMBER: JP 11-371382
;  PRIOR FILING DATE: 1999-12-27
;  PRIOR APPLICATION NUMBER: JP 11-178999
;  PRIOR FILING DATE: 1999-06-24
;  PRIOR APPLICATION NUMBER: JP 11-87192
;  PRIOR FILING DATE: 1999-03-29
;  NUMBER OF SEQ ID NOS: 36
;  SOFTWARE: FastSEQ for Windows Version 4.0
; SEQ ID NO 9
;   LENGTH: 5514
;   TYPE: DNA
;   ORGANISM: Homo sapiens
;   FEATURE:
;   NAME/KEY: intron
;   LOCATION: (1)...(1031)
;   FEATURE:
;   NAME/KEY: exon
;   LOCATION: (1032)...(1118)
;   FEATURE:
;   NAME/KEY: intron
;   LOCATION: (1119)...(5514)
US-09-966-880A-9

  Query Match             12.8%;  Score 14.8;  DB 1;  Length 5514;
  Best Local Similarity   59.5%;  Pred. No. 2.4;
  Matches   25;  Conservative    0;  Mismatches   17;  Indels    0;  Gaps    0;

Qy         16 GGAATACTTTTGTAGAAAACCACGAAAGAACTTTCAAAGCCT 57
              | |||| || |||| | | |    | || | ||  | ||| |
Db        703 GTAATATTTATGTAAATACCTTAAAGAGCATTTAAATAGCTT 662
```

```
RESULT 7
US-09-966-880A-15
; Sequence 15, Application US/09966880A
; GENERAL INFORMATION:
;  APPLICANT: Honjo, Tasuku
;  APPLICANT:  Muramatsu, Masamichi
;  TITLE OF INVENTION: NOVEL CYTIDINE DEAMINASE
;  FILE REFERENCE: 06501-088001
;  CURRENT APPLICATION NUMBER: US/09/966,880A
;  CURRENT FILING DATE:  2001-09-28
;  PRIOR APPLICATION NUMBER: PCT/JP00/01918
;  PRIOR FILING DATE: 2000-03-28
;  PRIOR APPLICATION NUMBER: JP 11-371382
;  PRIOR FILING DATE: 1999-12-27
;  PRIOR APPLICATION NUMBER: JP 11-178999
;  PRIOR FILING DATE: 1999-06-24
;  PRIOR APPLICATION NUMBER: JP 11-87192
;  PRIOR FILING DATE: 1999-03-29
;  NUMBER OF SEQ ID NOS: 36
;  SOFTWARE: FastSEQ for Windows Version 4.0
; SEQ ID NO 15
;   LENGTH: 2172
;   TYPE: DNA
;   ORGANISM: Homo sapiens
US-09-966-880A-15

  Query Match           11.9%;  Score 13.8;  DB 1;  Length 2172;
  Best Local Similarity  63.6%;  Pred. No. 5.9;
  Matches   21;  Conservative    0;  Mismatches   12;  Indels    0;  Gaps    0;

Qy         51 AAAGCCTGGGAAGGGCTGCATGAAAATTCAGTT 83
              || |   ||||||   |||| | |||||  | |
Db       1545 AAGGATGGGGAAGCATTGCAAGGAAATTGTGCT 1577


RESULT 8
US-09-966-880A-12/c
; Sequence 12, Application US/09966880A
; GENERAL INFORMATION:
;  APPLICANT: Honjo, Tasuku
;  APPLICANT:  Muramatsu, Masamichi
;  TITLE OF INVENTION: NOVEL CYTIDINE DEAMINASE
;  FILE REFERENCE: 06501-088001
;  CURRENT APPLICATION NUMBER: US/09/966,880A
;  CURRENT FILING DATE:  2001-09-28
;  PRIOR APPLICATION NUMBER: PCT/JP00/01918
;  PRIOR FILING DATE: 2000-03-28
;  PRIOR APPLICATION NUMBER: JP 11-371382
;  PRIOR FILING DATE: 1999-12-27
;  PRIOR APPLICATION NUMBER: JP 11-178999
;  PRIOR FILING DATE: 1999-06-24
;  PRIOR APPLICATION NUMBER: JP 11-87192
;  PRIOR FILING DATE: 1999-03-29
;  NUMBER OF SEQ ID NOS: 36
;  SOFTWARE: FastSEQ for Windows Version 4.0
; SEQ ID NO 12
;   LENGTH: 148
;   TYPE: DNA
;   ORGANISM: Homo sapiens
US-09-966-880A-12

  Query Match           11.6%;  Score 13.4;  DB 1;  Length 148;
  Best Local Similarity  46.3%;  Pred. No. 75;
  Matches   44;  Conservative    0;  Mismatches   51;  Indels    0;  Gaps    0;

Qy         22 CTTTTGTAGAAAACCACGAAAGAACTTTCAAAGCCTGGGAAGGGCTGCATGAAAATTCAG 81
              ||| |   ||| |  || |||| |  | | |||     | |       || |    ||||
Db        148 CTTATTGCGAAGATAACCAAAGTCCAGTGAAAAGGATGTAGCACTGTCACGCCTCTTCAC 89

Qy         82 TTCGTCTCTCCAGACAGCTTCGGCGCATCCTTTTG 116
              | |||  | |  |   |  ||     |  || || |
Db         88 TACGTAGCACAGGTAGGTCTCACGCCGACCCTTAG 54


RESULT 9
US-09-966-880A-14/c
; Sequence 14, Application US/09966880A
; GENERAL INFORMATION:
;  APPLICANT: Honjo, Tasuku
;  APPLICANT:  Muramatsu, Masamichi
;  TITLE OF INVENTION: NOVEL CYTIDINE DEAMINASE
;  FILE REFERENCE: 06501-088001
;  CURRENT APPLICATION NUMBER: US/09/966,880A
;  CURRENT FILING DATE:  2001-09-28
;  PRIOR APPLICATION NUMBER: PCT/JP00/01918
;  PRIOR FILING DATE: 2000-03-28
;  PRIOR APPLICATION NUMBER: JP 11-371382
;  PRIOR FILING DATE: 1999-12-27
;  PRIOR APPLICATION NUMBER: JP 11-178999
;  PRIOR FILING DATE: 1999-06-24
;  PRIOR APPLICATION NUMBER: JP 11-87192
;  PRIOR FILING DATE: 1999-03-29
;  NUMBER OF SEQ ID NOS: 36
;  SOFTWARE: FastSEQ for Windows Version 4.0
; SEQ ID NO 14
;   LENGTH: 116
;   TYPE: DNA
;   ORGANISM: Homo sapiens
US-09-966-880A-14

  Query Match           9.3%;  Score 10.8;  DB 1;  Length 116;
  Best Local Similarity  60.0%;  Pred. No. 1e+02;
  Matches   18;  Conservative    0;  Mismatches   12;  Indels    0;  Gaps    0;

Qy         18 AATACTTTTGTAGAAAACCACGAAAGAACT 47
              | | |||| || |    | || |||| | |
Db         47 AGTTCTTTCGTGGTTTTCTACAAAAGTATT 18


RESULT 10
US-09-966-880A-13/c
; Sequence 13, Application US/09966880A
; GENERAL INFORMATION:
;  APPLICANT: Honjo, Tasuku
;  APPLICANT:  Muramatsu, Masamichi
;  TITLE OF INVENTION: NOVEL CYTIDINE DEAMINASE
;  FILE REFERENCE: 06501-088001
;  CURRENT APPLICATION NUMBER: US/09/966,880A
;  CURRENT FILING DATE:  2001-09-28
;  PRIOR APPLICATION NUMBER: PCT/JP00/01918
;  PRIOR FILING DATE: 2000-03-28
;  PRIOR APPLICATION NUMBER: JP 11-371382
;  PRIOR FILING DATE: 1999-12-27
;  PRIOR APPLICATION NUMBER: JP 11-178999
;  PRIOR FILING DATE: 1999-06-24
;  PRIOR APPLICATION NUMBER: JP 11-87192
;  PRIOR FILING DATE: 1999-03-29
;  NUMBER OF SEQ ID NOS: 36
;  SOFTWARE: FastSEQ for Windows Version 4.0
; SEQ ID NO 13
;   LENGTH: 271
;   TYPE: DNA
;   ORGANISM: Homo sapiens
US-09-966-880A-13

  Query Match           8.6%;  Score 10;  DB 1;  Length 271;
  Best Local Similarity  52.4%;  Pred. No. 48;
  Matches   22;  Conservative    0;  Mismatches   20;  Indels    0;  Gaps    0;

Qy         28 TAGAAAACCACGAAAGAACTTTCAAAGCCTGGGAAGGGCTGC 69
              | |||   || ||  |   |||  |  || | |  | || ||
Db        269 TTGAAGGTCATGATGGCTATTTGCACCCCGGCGCGGTGCAGC 228


RESULT 11
US-09-966-880A-11
```

```
; Sequence 11, Application US/09966880A
; GENERAL INFORMATION:
;  APPLICANT: Honjo, Tasuku
;  APPLICANT:  Muramatsu, Masamichi
;  TITLE OF INVENTION: NOVEL CYTIDINE DEAMINASE
;  FILE REFERENCE: 06501-088001
;  CURRENT APPLICATION NUMBER: US/09/966,880A
;  CURRENT FILING DATE:  2001-09-28
;  PRIOR APPLICATION NUMBER: PCT/JP00/01918
;  PRIOR FILING DATE: 2000-03-28
;  PRIOR APPLICATION NUMBER: JP 11-371382
;  PRIOR FILING DATE: 1999-12-27
;  PRIOR APPLICATION NUMBER: JP 11-178999
;  PRIOR FILING DATE: 1999-06-24
;  PRIOR APPLICATION NUMBER: JP 11-87192
;  PRIOR FILING DATE: 1999-03-29
;  NUMBER OF SEQ ID NOS: 36
;  SOFTWARE: FastSEQ for Windows Version 4.0
; SEQ ID NO 11
;   LENGTH: 87
;   TYPE: DNA
;   ORGANISM: Homo sapiens
US-09-966-880A-11

  Query Match             8.3%;  Score 9.6;  DB 1;  Length 87;
  Best Local Similarity   56.2%;  Pred. No. 1.4e+02;
  Matches   18;  Conservative    0;  Mismatches   14;  Indels    0;  Gaps    0;

Qy         25 TTGTAGAAAACCACGAAAGAACTTTCAAAGCC 56
              ||| ||  |  || |||   ||| |  |  ||
Db         45 TTGCAGGGAGGCAAGAAGACACTCTGGACACC 76


RESULT 12
US-09-966-880A-12
; Sequence 12, Application US/09966880A
; GENERAL INFORMATION:
;  APPLICANT: Honjo, Tasuku
;  APPLICANT:  Muramatsu, Masamichi
;  TITLE OF INVENTION: NOVEL CYTIDINE DEAMINASE
;  FILE REFERENCE: 06501-088001
;  CURRENT APPLICATION NUMBER: US/09/966,880A
;  CURRENT FILING DATE:  2001-09-28
;  PRIOR APPLICATION NUMBER: PCT/JP00/01918
;  PRIOR FILING DATE: 2000-03-28
;  PRIOR APPLICATION NUMBER: JP 11-371382
;  PRIOR FILING DATE: 1999-12-27
;  PRIOR APPLICATION NUMBER: JP 11-178999
;  PRIOR FILING DATE: 1999-06-24
;  PRIOR APPLICATION NUMBER: JP 11-87192
;  PRIOR FILING DATE: 1999-03-29
;  NUMBER OF SEQ ID NOS: 36
;  SOFTWARE: FastSEQ for Windows Version 4.0
; SEQ ID NO 12
;   LENGTH: 148
;   TYPE: DNA
;   ORGANISM: Homo sapiens
US-09-966-880A-12

  Query Match             7.8%;  Score 9;  DB 1;  Length 148;
  Best Local Similarity   100.0%;  Pred. No. 87;
  Matches    9;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy        107 CATCCTTTT 115
              |||||||||
Db        111 CATCCTTTT 119


RESULT 13
US-09-966-880A-13
; Sequence 13, Application US/09966880A
; GENERAL INFORMATION:
;  APPLICANT: Honjo, Tasuku
;  APPLICANT:  Muramatsu, Masamichi
;  TITLE OF INVENTION: NOVEL CYTIDINE DEAMINASE
;  FILE REFERENCE: 06501-088001
;  CURRENT APPLICATION NUMBER: US/09/966,880A
;  CURRENT FILING DATE:  2001-09-28
;  PRIOR APPLICATION NUMBER: PCT/JP00/01918
;  PRIOR FILING DATE: 2000-03-28
;  PRIOR APPLICATION NUMBER: JP 11-371382
;  PRIOR FILING DATE: 1999-12-27
;  PRIOR APPLICATION NUMBER: JP 11-178999
;  PRIOR FILING DATE: 1999-06-24
;  PRIOR APPLICATION NUMBER: JP 11-87192
;  PRIOR FILING DATE: 1999-03-29
;  NUMBER OF SEQ ID NOS: 36
;  SOFTWARE: FastSEQ for Windows Version 4.0
; SEQ ID NO 13
;   LENGTH: 271
;   TYPE: DNA
;   ORGANISM: Homo sapiens
US-09-966-880A-13

  Query Match             7.6%;  Score 8.8;  DB 1;  Length 271;
  Best Local Similarity   57.1%;  Pred. No. 50;
  Matches   16;  Conservative    0;  Mismatches   12;  Indels    0;  Gaps    0;

Qy         27 GTAGAAAACCACGAAAGAACTTTCAAAG 54
              ||  |||     |   |  || |||||||
Db        244 GTGCAAATAGCCATCATGACCTTCAAAG 271


RESULT 14
US-09-966-880A-11/c
; Sequence 11, Application US/09966880A
; GENERAL INFORMATION:
;  APPLICANT: Honjo, Tasuku
;  APPLICANT:  Muramatsu, Masamichi
;  TITLE OF INVENTION: NOVEL CYTIDINE DEAMINASE
;  FILE REFERENCE: 06501-088001
;  CURRENT APPLICATION NUMBER: US/09/966,880A
;  CURRENT FILING DATE:  2001-09-28
;  PRIOR APPLICATION NUMBER: PCT/JP00/01918
;  PRIOR FILING DATE: 2000-03-28
;  PRIOR APPLICATION NUMBER: JP 11-371382
;  PRIOR FILING DATE: 1999-12-27
;  PRIOR APPLICATION NUMBER: JP 11-178999
;  PRIOR FILING DATE: 1999-06-24
;  PRIOR APPLICATION NUMBER: JP 11-87192
;  PRIOR FILING DATE: 1999-03-29
;  NUMBER OF SEQ ID NOS: 36
;  SOFTWARE: FastSEQ for Windows Version 4.0
; SEQ ID NO 11
;   LENGTH: 87
;   TYPE: DNA
;   ORGANISM: Homo sapiens
US-09-966-880A-11

  Query Match             7.2%;  Score 8.4;  DB 1;  Length 87;
  Best Local Similarity   57.7%;  Pred. No. 1.5e+02;
  Matches   15;  Conservative    0;  Mismatches   11;  Indels    0;  Gaps    0;

Qy         88 TCTCCAGACAGCTTCGGCGCATCCTT 113
              | ||||||  |  |     || ||| |
Db         74 TGTCCAGAGTGTCTTCTTGCCTCCCT 49


Search completed: March 10, 2004, 13:40:48
Job time : 0.990586 secs

                                GenCore version 5.1.6
                        Copyright (c) 1993 - 2004  Compugen Ltd.


OM nucleic - nucleic search, using sw model
```

Run on: March 10, 2004, 13:38:36 ; Search time 18.5479 Seconds
(without alignments)
3.483 Million cell updates/sec

Title: US-09-966-880A-15
Perfect score: 2172
Sequence: 1 cccctgtatgaggttgatga.....agtatgatggaataaacttg 2172

Scoring table: IDENTITY_NUC
Gapop 10.0 , Gapext 0.5

Searched: 7 seqs, 14872 residues

Total number of hits satisfying chosen parameters: 14

Minimum DB seq length: 0
Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries

Database : US09966880A.seq:*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

	Result No.	Score	% Query Match	Length	DB	ID	Description
	1	2172	100.0	2172	1	US-09-966-880A-15	Sequence 15, Appl
	2	2172	100.0	6564	1	US-09-966-880A-10	Sequence 10, Appl
c	3	178.6	8.2	5514	1	US-09-966-880A-9	Sequence 9, Appli
	4	174.2	8.0	5514	1	US-09-966-880A-9	Sequence 9, Appli
c	5	29.4	1.4	6564	1	US-09-966-880A-10	Sequence 10, Appl
c	6	26	1.2	2172	1	US-09-966-880A-15	Sequence 15, Appl
c	7	16	0.7	116	1	US-09-966-880A-14	Sequence 14, Appl
	8	14.8	0.7	148	1	US-09-966-880A-12	Sequence 12, Appl
c	9	14.8	0.7	148	1	US-09-966-880A-12	Sequence 12, Appl
	10	14.4	0.7	87	1	US-09-966-880A-11	Sequence 11, Appl
	11	13.8	0.6	116	1	US-09-966-880A-14	Sequence 14, Appl
c	12	13.4	0.6	87	1	US-09-966-880A-11	Sequence 11, Appl
c	13	13.4	0.6	271	1	US-09-966-880A-13	Sequence 13, Appl
	14	12	0.6	271	1	US-09-966-880A-13	Sequence 13, Appl

ALIGNMENTS

RESULT 1
US-09-966-880A-15
; Sequence 15, Application US/09966880A
; GENERAL INFORMATION:
; APPLICANT: Honjo, Tasuku
; APPLICANT: Muramatsu, Masamichi
; TITLE OF INVENTION: NOVEL CYTIDINE DEAMINASE
; FILE REFERENCE: 06501-088001
; CURRENT APPLICATION NUMBER: US/09/966,880A
; CURRENT FILING DATE: 2001-09-28
; PRIOR APPLICATION NUMBER: PCT/JP00/01918
; PRIOR FILING DATE: 2000-03-28
; PRIOR APPLICATION NUMBER: JP 11-371382
; PRIOR FILING DATE: 1999-12-27
; PRIOR APPLICATION NUMBER: JP 11-178999
; PRIOR FILING DATE: 1999-06-24
; PRIOR APPLICATION NUMBER: JP 11-87192
; PRIOR FILING DATE: 1999-03-29
; NUMBER OF SEQ ID NOS: 36
; SOFTWARE: FastSEQ for Windows Version 4.0

; SEQ ID NO 15
; LENGTH: 2172
; TYPE: DNA
; ORGANISM: Homo sapiens
US-09-966-880A-15

Query Match 100.0%; Score 2172; DB 1; Length 2172;
Best Local Similarity 100.0%; Pred. No. 6.3e-59;
Matches 2172; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

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Qy          1 CCCCTGTATGAGGTTGATGACTTACGAGACGCATTTCGTACTTTGGGACTTTGATAGCAA 60
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db          1 CCCCTGTATGAGGTTGATGACTTACGAGACGCATTTCGTACTTTGGGACTTTGATAGCAA 60

Qy         61 CTTCCAGGAATGTCACACACGATGAAATATCTCTGCTGAAGACAGTGGATAAAAAACAGT 120
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db         61 CTTCCAGGAATGTCACACACGATGAAATATCTCTGCTGAAGACAGTGGATAAAAAACAGT 120

Qy        121 CCTTCAAGTCTTCTCTGTTTTTATTCTTCAACTCTCACTTTCTTAGAGTTTACAGAAAAA 180
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        121 CCTTCAAGTCTTCTCTGTTTTTATTCTTCAACTCTCACTTTCTTAGAGTTTACAGAAAAA 180

Qy        181 ATATTTATATACGACTCTTTAAAAAGATCTATGTCTTGAAAATAGAGAAGGAACACAGGT 240
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        181 ATATTTATATACGACTCTTTAAAAAGATCTATGTCTTGAAAATAGAGAAGGAACACAGGT 240

Qy        241 CTGGCCAGGGACGTGCTGCAATTGGTGCAGTTTTGAATGCAACATTGTCCCCTACTGGGA 300
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        241 CTGGCCAGGGACGTGCTGCAATTGGTGCAGTTTTGAATGCAACATTGTCCCCTACTGGGA 300

Qy        301 ATAACAGAACTGCAGGACCTGGGAGCATCCTAAAGTGTCAACGTTTTTCTATGACTTTTA 360
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        301 ATAACAGAACTGCAGGACCTGGGAGCATCCTAAAGTGTCAACGTTTTTCTATGACTTTTA 360

Qy        361 GGTAGGATGAGAGCAGAAGGTAGATCCTAAAAAGCATGGTGAGAGGATCAAATGTTTTTA 420
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        361 GGTAGGATGAGAGCAGAAGGTAGATCCTAAAAAGCATGGTGAGAGGATCAAATGTTTTTA 420

Qy        421 TATCAACATCCTTTATTATTTGATTCATTTGAGTTAACAGTGGTGTTAGTGATAGATTTT 480
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        421 TATCAACATCCTTTATTATTTGATTCATTTGAGTTAACAGTGGTGTTAGTGATAGATTTT 480

Qy        481 TCTATTCTTTTCCCTTGACGTTTACTTTCAAGTAACACAAACTCTTCCATCAGGCCATGA 540
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        481 TCTATTCTTTTCCCTTGACGTTTACTTTCAAGTAACACAAACTCTTCCATCAGGCCATGA 540

Qy        541 TCTATAGGACCTCCTAATGAGAGTATCTGGGTGATTGTGACCCCAAACCATCTCTCCAAA 600
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        541 TCTATAGGACCTCCTAATGAGAGTATCTGGGTGATTGTGACCCCAAACCATCTCTCCAAA 600

Qy        601 GCATTAATATCCAATCATGCGCTGTATGTTTTAATCAGCAGAAGCATGTTTTTATGTTTG 660
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        601 GCATTAATATCCAATCATGCGCTGTATGTTTTAATCAGCAGAAGCATGTTTTTATGTTTG 660

Qy        661 TACAAAAGAAGATTGTTATGGGTGGGGATGGAGGTATAGACCATGCATGGTCACCTTCAA 720
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        661 TACAAAAGAAGATTGTTATGGGTGGGGATGGAGGTATAGACCATGCATGGTCACCTTCAA 720

Qy        721 GCTACTTTAATAAAGGATCTTAAAATGGGCAGGAGGACTGTGAACAAGACACCCTAATAA 780
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        721 GCTACTTTAATAAAGGATCTTAAAATGGGCAGGAGGACTGTGAACAAGACACCCTAATAA 780

Qy        781 TGGGTTGATGTCTGAAGTAGCAAATCTTCTGGAAACGCAAACTCTTTTAAGGAAGTCCCT 840
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        781 TGGGTTGATGTCTGAAGTAGCAAATCTTCTGGAAACGCAAACTCTTTTAAGGAAGTCCCT 840

Qy        841 AATTTAGAAACACCCACAAACTTCACATATCATAATTAGCAAACAATTGGAAGGAAGTTG 900
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        841 AATTTAGAAACACCCACAAACTTCACATATCATAATTAGCAAACAATTGGAAGGAAGTTG 900

Qy        901 CTTGAATGTTGGGGAGAGGAAAATCTATTGGCTCTCGTGGGTCTCTTCATCTCAGAAATG 960
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        901 CTTGAATGTTGGGGAGAGGAAAATCTATTGGCTCTCGTGGGTCTCTTCATCTCAGAAATG 960
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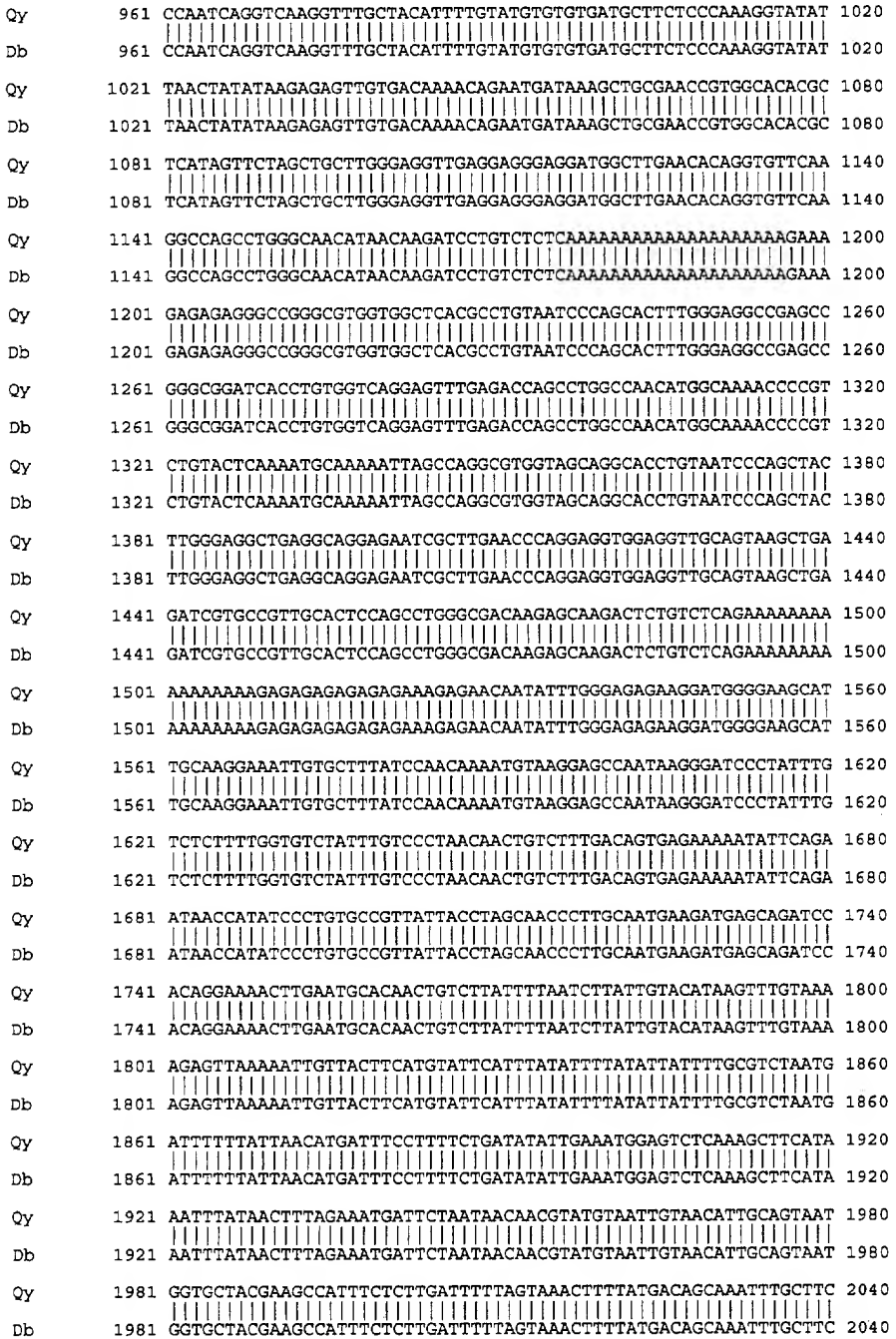

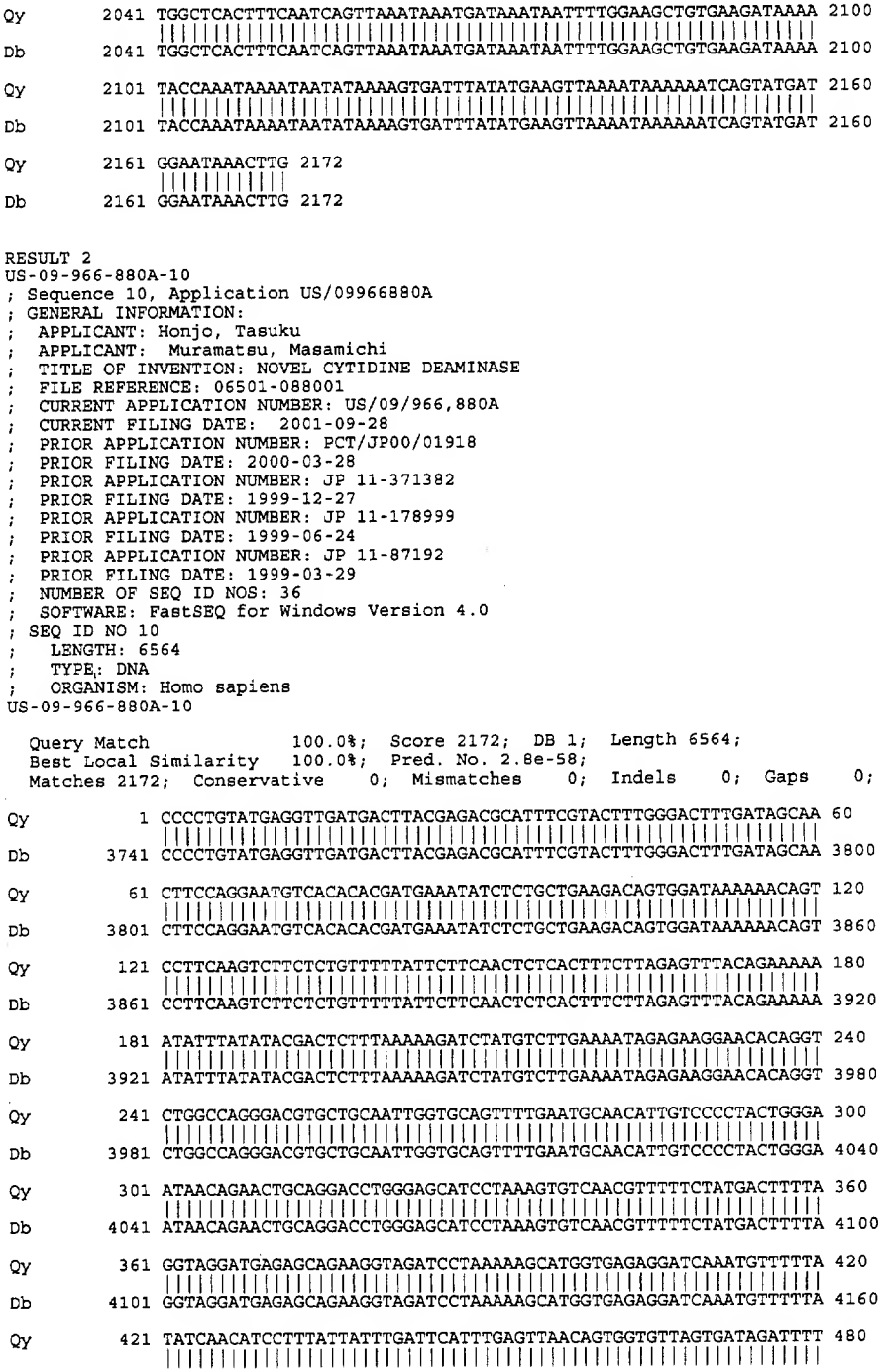

RESULT 2
US-09-966-880A-10
; Sequence 10, Application US/09966880A
; GENERAL INFORMATION:
; APPLICANT: Honjo, Tasuku
; APPLICANT: Muramatsu, Masamichi
; TITLE OF INVENTION: NOVEL CYTIDINE DEAMINASE
; FILE REFERENCE: 06501-088001
; CURRENT APPLICATION NUMBER: US/09/966,880A
; CURRENT FILING DATE: 2001-09-28
; PRIOR APPLICATION NUMBER: PCT/JP00/01918
; PRIOR FILING DATE: 2000-03-28
; PRIOR APPLICATION NUMBER: JP 11-371382
; PRIOR FILING DATE: 1999-12-27
; PRIOR APPLICATION NUMBER: JP 11-178999
; PRIOR FILING DATE: 1999-06-24
; PRIOR APPLICATION NUMBER: JP 11-87192
; PRIOR FILING DATE: 1999-03-29
; NUMBER OF SEQ ID NOS: 36
; SOFTWARE: FastSEQ for Windows Version 4.0
; SEQ ID NO 10
; LENGTH: 6564
; TYPE: DNA
; ORGANISM: Homo sapiens
US-09-966-880A-10

Query Match 100.0%; Score 2172; DB 1; Length 6564;
Best Local Similarity 100.0%; Pred. No. 2.8e-58;
Matches 2172; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

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Db      4161 TATCAACATCCTTTATTATTTGATTCATTTGAGTTAACAGTGGTGTTAGTGATAGATTTT 4220
Qy       481 TCTATTCTTTTCCCTTGACGTTTACTTTCAAGTAACACAAACTCTTCCATCAGGCCATGA 540
Db      4221 TCTATTCTTTTCCCTTGACGTTTACTTTCAAGTAACACAAACTCTTCCATCAGGCCATGA 4280
Qy       541 TCTATAGGACCTCCTAATGAGAGTATCTGGGTGATTGTGACCCCAAACCATCTCTCCAAA 600
Db      4281 TCTATAGGACCTCCTAATGAGAGTATCTGGGTGATTGTGACCCCAAACCATCTCTCCAAA 4340
Qy       601 GCATTAATATCCAATCATGCGCTGTATGTTTTAATCAGCAGAAGCATGTTTTTATGTTTG 660
Db      4341 GCATTAATATCCAATCATGCGCTGTATGTTTTAATCAGCAGAAGCATGTTTTTATGTTTG 4400
Qy       661 TACAAAAGAAGATTGTTATGGGTGGGGATGGAGGTATAGACCATGCATGGTCACCTTCAA 720
Db      4401 TACAAAAGAAGATTGTTATGGGTGGGGATGGAGGTATAGACCATGCATGGTCACCTTCAA 4460
Qy       721 GCTACTTTAATAAAGGATCTTAAAATGGGCAGGAGGACTGTGAACAAGACACCCTAATAA 780
Db      4461 GCTACTTTAATAAAGGATCTTAAAATGGGCAGGAGGACTGTGAACAAGACACCCTAATAA 4520
Qy       781 TGGGTTGATGTCTGAAGTAGCAAATCTTCTGGAAACGCAAACTCTTTTAAGGAAGTCCCT 840
Db      4521 TGGGTTGATGTCTGAAGTAGCAAATCTTCTGGAAACGCAAACTCTTTTAAGGAAGTCCCT 4580
Qy       841 AATTTAGAAACACCCACAAACTTCACATATCATAATTAGCAAACAATTGGAAGGAAGTTG 900
Db      4581 AATTTAGAAACACCCACAAACTTCACATATCATAATTAGCAAACAATTGGAAGGAAGTTG 4640
Qy       901 CTTGAATGTTGGGGAGAGGAAAATCTATTGGCTCTCGTGGGTCTCTTCATCTCAGAAATG 960
Db      4641 CTTGAATGTTGGGGAGAGGAAAATCTATTGGCTCTCGTGGGTCTCTTCATCTCAGAAATG 4700
Qy       961 CCAATCAGGTCAAGGTTTGCTACATTTTGTATGTGTGTGATGCTTCTCCCAAAGGTATAT 1020
Db      4701 CCAATCAGGTCAAGGTTTGCTACATTTTGTATGTGTGTGATGCTTCTCCCAAAGGTATAT 4760
Qy      1021 TAACTATATAAGAGAGTTGTGACAAAACAGAATGATAAAGCTGCGAACCGTGGCACACGC 1080
Db      4761 TAACTATATAAGAGAGTTGTGACAAAACAGAATGATAAAGCTGCGAACCGTGGCACACGC 4820
Qy      1081 TCATAGTTCTAGCTGCTTGGGAGGTTGAGGAGGGAGGATGGCTTGAACACAGGTGTTCAA 1140
Db      4821 TCATAGTTCTAGCTGCTTGGGAGGTTGAGGAGGGAGGATGGCTTGAACACAGGTGTTCAA 4880
Qy      1141 GGCCAGCCTGGGCAACATAACAAGATCCTGTCTCTCAAAAAAAAAAAAAAAAAAAAGAAA 1200
Db      4881 GGCCAGCCTGGGCAACATAACAAGATCCTGTCTCTCAAAAAAAAAAAAAAAAAAAAGAAA 4940
Qy      1201 GAGAGAGGGCCGGGCGTGGTGGCTCACGCCTGTAATCCCAGCACTTTGGGAGGCCGAGCC 1260
Db      4941 GAGAGAGGGCCGGGCGTGGTGGCTCACGCCTGTAATCCCAGCACTTTGGGAGGCCGAGCC 5000
Qy      1261 GGGCGGATCACCTGTGGTCAGGAGTTTGAGACCAGCCTGGCCAACATGGCAAAACCCCGT 1320
Db      5001 GGGCGGATCACCTGTGGTCAGGAGTTTGAGACCAGCCTGGCCAACATGGCAAAACCCCGT 5060
Qy      1321 CTGTACTCAAAATGCAAAAATTAGCCAGGCGTGGTAGCAGGCACCTGTAATCCCAGCTAC 1380
Db      5061 CTGTACTCAAAATGCAAAAATTAGCCAGGCGTGGTAGCAGGCACCTGTAATCCCAGCTAC 5120
Qy      1381 TTGGGAGGCTGAGGCAGGAGAATCGCTTGAACCCAGGAGGTGGAGGTTGCAGTAAGCTGA 1440
Db      5121 TTGGGAGGCTGAGGCAGGAGAATCGCTTGAACCCAGGAGGTGGAGGTTGCAGTAAGCTGA 5180
Qy      1441 GATCGTGCCGTTGCACTCCAGCCTGGGCGACAAGAGCAAGACTCTGTCTCAGAAAAAAAA 1500
Db      5181 GATCGTGCCGTTGCACTCCAGCCTGGGCGACAAGAGCAAGACTCTGTCTCAGAAAAAAAA 5240
Qy      1501 AAAAAAAAGAGAGAGAGAGAGAAAGAGAACAATATTTGGGAGAGAAGGATGGGGAAGCAT 1560
Db      5241 AAAAAAAAGAGAGAGAGAGAGAAAGAGAACAATATTTGGGAGAGAAGGATGGGGAAGCAT 5300
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Qy      1561 TGCAAGGAAATTGTGCTTTATCCAACAAAATGTAAGGAGCCAATAAGGGATCCCTATTTG 1620
Db      5301 TGCAAGGAAATTGTGCTTTATCCAACAAAATGTAAGGAGCCAATAAGGGATCCCTATTTG 5360
Qy      1621 TCTCTTTTGGTGTCTATTTGTCCCTAACAACTGTCTTTGACAGTGAGAAAAATATTCAGA 1680
Db      5361 TCTCTTTTGGTGTCTATTTGTCCCTAACAACTGTCTTTGACAGTGAGAAAAATATTCAGA 5420
Qy      1681 ATAACCATATCCCTGTGCCGTTATTACCTAGCAACCCTTGCAATGAAGATGAGCAGATCC 1740
Db      5421 ATAACCATATCCCTGTGCCGTTATTACCTAGCAACCCTTGCAATGAAGATGAGCAGATCC 5480
Qy      1741 ACAGGAAAACTTGAATGCACAACTGTCTTATTTTAATCTTATTGTACATAAGTTTGTAAA 1800
Db      5481 ACAGGAAAACTTGAATGCACAACTGTCTTATTTTAATCTTATTGTACATAAGTTTGTAAA 5540
Qy      1801 AGAGTTAAAAATTGTTACTTCATGTATTCATTTATATTTTATATTATTTTGCGTCTAATG 1860
Db      5541 AGAGTTAAAAATTGTTACTTCATGTATTCATTTATATTTTATATTATTTTGCGTCTAATG 5600
Qy      1861 ATTTTTTATTAACATGATTTCCTTTTCTGATATATTGAAATGGAGTCTCAAAGCTTCATA 1920
Db      5601 ATTTTTTATTAACATGATTTCCTTTTCTGATATATTGAAATGGAGTCTCAAAGCTTCATA 5660
Qy      1921 AATTTATAACTTTAGAAATGATTCTAATAACAACGTATGTAATTGTAACATTGCAGTAAT 1980
Db      5661 AATTTATAACTTTAGAAATGATTCTAATAACAACGTATGTAATTGTAACATTGCAGTAAT 5720
Qy      1981 GGTGCTACGAAGCCATTTCTCTTGATTTTTAGTAAACTTTTATGACAGCAAATTTGCTTC 2040
Db      5721 GGTGCTACGAAGCCATTTCTCTTGATTTTTAGTAAACTTTTATGACAGCAAATTTGCTTC 5780
Qy      2041 TGGCTCACTTTCAATCAGTTAAATAAATGATAAATAATTTTGGAAGCTGTGAAGATAAAA 2100
Db      5781 TGGCTCACTTTCAATCAGTTAAATAAATGATAAATAATTTTGGAAGCTGTGAAGATAAAA 5840
Qy      2101 TACCAAATAAAATAATATAAAAGTGATTTATATGAAGTTAAAATAAAAAATCAGTATGAT 2160
Db      5841 TACCAAATAAAATAATATAAAAGTGATTTATATGAAGTTAAAATAAAAAATCAGTATGAT 5900
Qy      2161 GGAATAAACTTG 2172
Db      5901 GGAATAAACTTG 5912
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RESULT 3
US-09-966-880A-9/c
; Sequence 9, Application US/09966880A
; GENERAL INFORMATION:
; APPLICANT: Honjo, Tasuku
; APPLICANT: Muramatsu, Masamichi
; TITLE OF INVENTION: NOVEL CYTIDINE DEAMINASE
; FILE REFERENCE: 06501-088001
; CURRENT APPLICATION NUMBER: US/09/966,880A
; CURRENT FILING DATE: 2001-09-28
; PRIOR APPLICATION NUMBER: PCT/JP00/01918
; PRIOR FILING DATE: 2000-03-28
; PRIOR APPLICATION NUMBER: JP 11-371382
; PRIOR FILING DATE: 1999-12-27
; PRIOR APPLICATION NUMBER: JP 11-178999
; PRIOR FILING DATE: 1999-06-24
; PRIOR APPLICATION NUMBER: JP 11-87192
; PRIOR FILING DATE: 1999-03-29
; NUMBER OF SEQ ID NOS: 36
; SOFTWARE: FastSEQ for Windows Version 4.0
; SEQ ID NO 9
; LENGTH: 5514
; TYPE: DNA
; ORGANISM: Homo sapiens
; FEATURE:
; NAME/KEY: intron
; LOCATION: (1)...(1031)

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;   FEATURE:
;   NAME/KEY: exon
;   LOCATION: (1032)...(1118)
;   FEATURE:
;   NAME/KEY: intron
;   LOCATION: (1119)...(5514)
US-09-966-880A-9

  Query Match             8.2%;  Score 178.6;  DB 1;  Length 5514;
  Best Local Similarity   83.1%;  Pred. No. 0.12;
  Matches  202;  Conservative    1;  Mismatches   40;  Indels    0;  Gaps    0;

Qy       1272 CTGTGGTCAGGAGTTTGAGACCAGCCTGGCCAACATGGCAAAACCCCGTCTGTACTCAAA 1331
             ||| ||||||||||||||||||||||||||||||||||||||||  |||||||  ||| |||| |||
Db       5512 CTGAGGTCAGGAGTTTGAGACCAGCCTGGCCAACATGGTGAAACCCCATCTCTACTAAAA 5453

Qy       1332 ATGCAAAAATTAGCCAGGCGTGGTAGCAGGCACCTGTAATCCCAGCTACTTGGGAGGCTG 1391
             || |||| |||||||  | ||||| |  ||| ||||||||||| ||||  |||||||||
Db       5452 ATACAAACATTAGCCGAGTGTGGTGGTGGGCGCCTGTAATCCCATCTACCCGGGAGGCTG 5393

Qy       1392 AGGCAGGAGAATCGCTTGAACCCAGGAGGTGGAGGTTGCAGTAAGCTGAGATCGTGCCGT 1451
             ||||   ||  | ||||||||||||||||||||||||||||||||| ||||  |:|| |||| |
Db       5392 AGGCGACAGCTTTGCTTGAACCCAGGAGGTGGAGGTTGCAGTGAGCTATGRTCATGCCAT 5333

Qy       1452 TGCACTCCAGCCTGGGCGACAAGAGCAAGACTCTGTCTCAGAAAAAAAAAAAAAAAAGAG 1511
             | ||||||||| ||||| |||||| ||| ||||  ||||| ||||||||||||||||| |
Db       5332 TCCACTCCAGCATGGGCAACAAGACCAAAACTCCATCTCAAAAAAAAAAAAAAAAAAAAA 5273

Qy       1512 AGA 1514
             | ||
Db       5272 AAA 5270


RESULT 4
US-09-966-880A-9
; Sequence 9, Application US/09966880A
; GENERAL INFORMATION:
;  APPLICANT: Honjo, Tasuku
;  APPLICANT:  Muramatsu, Masamichi
;  TITLE OF INVENTION: NOVEL CYTIDINE DEAMINASE
;  FILE REFERENCE: 06501-088001
;  CURRENT APPLICATION NUMBER: US/09/966,880A
;  CURRENT FILING DATE:  2001-09-28
;  PRIOR APPLICATION NUMBER: PCT/JP00/01918
;  PRIOR FILING DATE: 2000-03-28
;  PRIOR APPLICATION NUMBER: JP 11-371382
;  PRIOR FILING DATE: 1999-12-27
;  PRIOR APPLICATION NUMBER: JP 11-178999
;  PRIOR FILING DATE: 1999-06-24
;  PRIOR APPLICATION NUMBER: JP 11-87192
;  PRIOR FILING DATE: 1999-03-29
;  NUMBER OF SEQ ID NOS: 36
;  SOFTWARE: FastSEQ for Windows Version 4.0
; SEQ ID NO 9
;   LENGTH: 5514
;   TYPE: DNA
;   ORGANISM: Homo sapiens
;   FEATURE:
;   NAME/KEY: intron
;   LOCATION: (1)...(1031)
;   FEATURE:
;   NAME/KEY: exon
;   LOCATION: (1032)...(1118)
;   FEATURE:
;   NAME/KEY: intron
;   LOCATION: (1119)...(5514)
US-09-966-880A-9

  Query Match             8.0%;  Score 174.2;  DB 1;  Length 5514;
  Best Local Similarity   74.8%;  Pred. No. 0.16;
  Matches  255;  Conservative    0;  Mismatches   78;  Indels    8;  Gaps    3;

Qy       1194 AAAGAAAGAGAGAGGGCCGGGCGTGGTGGCTCACGCCTGTAATCCCAGCACTTTGGGAGG 1253
             ||||  | | |||  ||| || ||||||||||||||||||||||||||||||| |||||||
Db       3542 AAAGTGAAACAGACAGCCAGGTGTGGTGGCTCACGCCTGTAATCCCAGCACTCTGGGAGG 3601

Qy       1254 CCGAGCCGGGCGGATCACCTGTGGTCAGGAGTTTGAGACCAGCCTGGCCAACATGGCAAA 1313
             | |||  ||| ||||| | || |  | |||||  |||||||||||  ||||||||||||
Db       3602 CTGAGGTGGGTGGATCGCTTGAGCCCTGGAGTTCAAGACCAGCCTGAGCAACATGGCAAA 3661

Qy       1314 ACCCCGTCTGTACTCAAAATGCAAAAATTAGCCAGGCGTGGTAGCAGGCACCTGTAATCC 1373
             ||||  || | |        | ||||||||||||| ||| |||| ||| |  |||||  |||
Db       3662 ACCCTGTTTCT------ATAACAAAAATTAGCCGGGCATGGTGGCATGTGCCTGTGGTCC 3715

Qy       1374 CAGCTACTTGGGAGGCTGAGGCAGGAGAATCGCTTGAACCCAGGAGGTGGAGGTTGCAGT 1433
             ||||||||  ||| ||||||||||||||||||  | ||  ||||||||||  ||| |||| |
Db       3716 CAGCTACTAGGG-GGCTGAGGCAGGAGAATCTTTGGAGCCCAGGAGGTCAAGGCTGCACT 3774

Qy       1434 AAGCTGAGATCGTGCCGTTGCACTCCAGCCTGGGCGACAAGAGCAAGACTCTGTCTCAGA 1493
             ||| | | | | |||  |||||||||||||||| |||| || | ||||  || |||| |
Db       3775 GAGCAGTGCTTGCGCCACTGCACTCCAGCCTGGGTGACAGGA-CCAGACCTTGCCTCAAA 3833

Qy       1494 AAAAAAAAAAAAAAAAGAGAGAGAGAGAGAAAGAGAACAATA 1534
             |||| || || ||||   | | | | |   | | ||| | |
Db       3834 AAAATAAGAAGAAAAATTAAAAATAAATGGAAACAACTACA 3874


RESULT 5
US-09-966-880A-10/c
; Sequence 10, Application US/09966880A
; GENERAL INFORMATION:
;  APPLICANT: Honjo, Tasuku
;  APPLICANT:  Muramatsu, Masamichi
;  TITLE OF INVENTION: NOVEL CYTIDINE DEAMINASE
;  FILE REFERENCE: 06501-088001
;  CURRENT APPLICATION NUMBER: US/09/966,880A
;  CURRENT FILING DATE:  2001-09-28
;  PRIOR APPLICATION NUMBER: PCT/JP00/01918
;  PRIOR FILING DATE: 2000-03-28
;  PRIOR APPLICATION NUMBER: JP 11-371382
;  PRIOR FILING DATE: 1999-12-27
;  PRIOR APPLICATION NUMBER: JP 11-178999
;  PRIOR FILING DATE: 1999-06-24
;  PRIOR APPLICATION NUMBER: JP 11-87192
;  PRIOR FILING DATE: 1999-03-29
;  NUMBER OF SEQ ID NOS: 36
;  SOFTWARE: FastSEQ for Windows Version 4.0
; SEQ ID NO 10
;   LENGTH: 6564
;   TYPE: DNA
;   ORGANISM: Homo sapiens
US-09-966-880A-10

  Query Match             1.4%;  Score 29.4;  DB 1;  Length 6564;
  Best Local Similarity   56.8%;  Pred. No. 1.9;
  Matches   54;  Conservative    0;  Mismatches   41;  Indels    0;  Gaps    0;

Qy       1495 AAAAAAAAAAAAAAAGAGAGAGAGAGAAAGAGAACAATATTTGGGAGAGAAGGATGGGG 1554
             ||| || |||| ||   | || ||| |||| |||| ||   | | |    | |||| |
Db       3489 AAACAACAAAAGAAAGAAAAGGGAGGGAAAAGGAACCTTAGCAGAGGGCTCTGAATGGTG 3430

Qy       1555 AAGCATTGCAAGGAAATTGTGCTTTATCCAACAAA 1589
             || ||    ||| |||  || | |     | |||
Db       3429 AAACAGCAGAAGAAAAAGCTGATGTGGAGGAGAAA 3395


RESULT 6
US-09-966-880A-15/c
; Sequence 15, Application US/09966880A
; GENERAL INFORMATION:
;  APPLICANT: Honjo, Tasuku
;  APPLICANT:  Muramatsu, Masamichi
;  TITLE OF INVENTION: NOVEL CYTIDINE DEAMINASE
;  FILE REFERENCE: 06501-088001
;  CURRENT APPLICATION NUMBER: US/09/966,880A
;  CURRENT FILING DATE:  2001-09-28
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;  PRIOR APPLICATION NUMBER: PCT/JP00/01918
;  PRIOR FILING DATE: 2000-03-28
;  PRIOR APPLICATION NUMBER: JP 11-371382
;  PRIOR FILING DATE: 1999-12-27
;  PRIOR APPLICATION NUMBER: JP 11-178999
;  PRIOR FILING DATE: 1999-06-24
;  PRIOR APPLICATION NUMBER: JP 11-87192
;  PRIOR FILING DATE: 1999-03-29
;  NUMBER OF SEQ ID NOS: 36
;  SOFTWARE: FastSEQ for Windows Version 4.0
; SEQ ID NO 15
;   LENGTH: 2172
;   TYPE: DNA
;   ORGANISM: Homo sapiens
US-09-966-880A-15

  Query Match             1.2%;  Score 26;  DB 1;  Length 2172;
  Best Local Similarity   59.5%;  Pred. No. 5.7;
  Matches   44;  Conservative    0;  Mismatches   30;  Indels    0;  Gaps    0;

Qy       1775 AATCTTATTGTACATAAGTTTGTAAAAGAGTTAAAAATTGTTACTTCATGTATTCATTTA 1834
              |||  |||   | ||||  |   || | ||  ||| |||| |||  || | ||   | |||
Db       1848 AATAATATAAAATATAAATGAATACATGAAGTAACAATTTTTAACTCTTTTACAAACTTA 1789

Qy       1835 TATTTTATATTATT 1848
              | |   |||  |||
Db       1788 TGTACAATAAGATT 1775


RESULT 7
US-09-966-880A-14/c
; Sequence 14, Application US/09966880A
; GENERAL INFORMATION:
;  APPLICANT: Honjo, Tasuku
;  APPLICANT:  Muramatsu, Masamichi
;  TITLE OF INVENTION: NOVEL CYTIDINE DEAMINASE
;  FILE REFERENCE: 06501-088001
;  CURRENT APPLICATION NUMBER: US/09/966,880A
;  CURRENT FILING DATE:  2001-09-28
;  PRIOR APPLICATION NUMBER: PCT/JP00/01918
;  PRIOR FILING DATE: 2000-03-28
;  PRIOR APPLICATION NUMBER: JP 11-371382
;  PRIOR FILING DATE: 1999-12-27
;  PRIOR APPLICATION NUMBER: JP 11-178999
;  PRIOR FILING DATE: 1999-06-24
;  PRIOR APPLICATION NUMBER: JP 11-87192
;  PRIOR FILING DATE: 1999-03-29
;  NUMBER OF SEQ ID NOS: 36
;  SOFTWARE: FastSEQ for Windows Version 4.0
; SEQ ID NO 14
;   LENGTH: 116
;   TYPE: DNA
;   ORGANISM: Homo sapiens
US-09-966-880A-14

  Query Match             0.7%;  Score 16;  DB 1;  Length 116;
  Best Local Similarity   50.0%;  Pred. No. 26;
  Matches   40;  Conservative    0;  Mismatches   40;  Indels    0;  Gaps    0;

Qy       1953 ACGTATGTAATTGTAACATTGCAGTAATGGTGCTACGAAGCCATTTCTCTTGATTTTTAG 2012
              |||  |   |||| | |    ||  |      |||  |||     ||   | | ||| ||
Db         86 ACGAACTGAATTTTCATGCAGCCCTTCCCAGGCTTTGAAAGTTCTTTCGTGGTTTTCTAC 27

Qy       2013 TAAACTTTTATGACAGCAAA 2032
              |||  | ||   ||| |||
Db         26 AAAAGTATTCCAGCAGTAAA 7


RESULT 8
US-09-966-880A-12
; Sequence 12, Application US/09966880A
; GENERAL INFORMATION:
;  APPLICANT: Honjo, Tasuku
;  APPLICANT:  Muramatsu, Masamichi
;  TITLE OF INVENTION: NOVEL CYTIDINE DEAMINASE
;  FILE REFERENCE: 06501-088001
;  CURRENT APPLICATION NUMBER: US/09/966,880A
;  CURRENT FILING DATE:  2001-09-28
;  PRIOR APPLICATION NUMBER: PCT/JP00/01918
;  PRIOR FILING DATE: 2000-03-28
;  PRIOR APPLICATION NUMBER: JP 11-371382
;  PRIOR FILING DATE: 1999-12-27
;  PRIOR APPLICATION NUMBER: JP 11-178999
;  PRIOR FILING DATE: 1999-06-24
;  PRIOR APPLICATION NUMBER: JP 11-87192
;  PRIOR FILING DATE: 1999-03-29
;  NUMBER OF SEQ ID NOS: 36
;  SOFTWARE: FastSEQ for Windows Version 4.0
; SEQ ID NO 12
;   LENGTH: 148
;   TYPE: DNA
;   ORGANISM: Homo sapiens
US-09-966-880A-12

  Query Match             0.7%;  Score 14.8;  DB 1;  Length 148;
  Best Local Similarity   56.0%;  Pred. No. 35;
  Matches   28;  Conservative    0;  Mismatches   22;  Indels    0;  Gaps    0;

Qy       1876 GATTTCCTTTTCTGATATATTGAAATGGAGTCTCAAAGCTTCATAAATTT 1925
              ||  | | | |   |  || ||||  || ||  ||  ||| |||   |||
Db         70 GACCTACCTGTGCTACGTAGTGAAGAGGCGTGACAGTGCTACATCCTTTT 119


RESULT 9
US-09-966-880A-12/c
; Sequence 12, Application US/09966880A
; GENERAL INFORMATION:
;  APPLICANT: Honjo, Tasuku
;  APPLICANT:  Muramatsu, Masamichi
;  TITLE OF INVENTION: NOVEL CYTIDINE DEAMINASE
;  FILE REFERENCE: 06501-088001
;  CURRENT APPLICATION NUMBER: US/09/966,880A
;  CURRENT FILING DATE:  2001-09-28
;  PRIOR APPLICATION NUMBER: PCT/JP00/01918
;  PRIOR FILING DATE: 2000-03-28
;  PRIOR APPLICATION NUMBER: JP 11-371382
;  PRIOR FILING DATE: 1999-12-27
;  PRIOR APPLICATION NUMBER: JP 11-178999
;  PRIOR FILING DATE: 1999-06-24
;  PRIOR APPLICATION NUMBER: JP 11-87192
;  PRIOR FILING DATE: 1999-03-29
;  NUMBER OF SEQ ID NOS: 36
;  SOFTWARE: FastSEQ for Windows Version 4.0
; SEQ ID NO 12
;   LENGTH: 148
;   TYPE: DNA
;   ORGANISM: Homo sapiens
US-09-966-880A-12

  Query Match             0.7%;  Score 14.8;  DB 1;  Length 148;
  Best Local Similarity   64.7%;  Pred. No. 35;
  Matches   22;  Conservative    0;  Mismatches   12;  Indels    0;  Gaps    0;

Qy       1523 AAGAGAACAATATTTGGGAGAGAAGGATGGGGAA 1556
              |||| ||| | | |   | || |||||||  | |
Db        139 AAGATAACCAAAGTCCAGTGAAAAGGATGTAGCA 106


RESULT 10
US-09-966-880A-11
; Sequence 11, Application US/09966880A
; GENERAL INFORMATION:
;  APPLICANT: Honjo, Tasuku
;  APPLICANT:  Muramatsu, Masamichi
;  TITLE OF INVENTION: NOVEL CYTIDINE DEAMINASE
;  FILE REFERENCE: 06501-088001
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;  CURRENT APPLICATION NUMBER: US/09/966,880A
;  CURRENT FILING DATE:  2001-09-28
;  PRIOR APPLICATION NUMBER: PCT/JP00/01918
;  PRIOR FILING DATE: 2000-03-28
;  PRIOR APPLICATION NUMBER: JP 11-371382
;  PRIOR FILING DATE: 1999-12-27
;  PRIOR APPLICATION NUMBER: JP 11-178999
;  PRIOR FILING DATE: 1999-06-24
;  PRIOR APPLICATION NUMBER: JP 11-87192
;  PRIOR FILING DATE: 1999-03-29
;  NUMBER OF SEQ ID NOS: 36
;  SOFTWARE: FastSEQ for Windows Version 4.0
; SEQ ID NO 11
;   LENGTH: 87
;   TYPE: DNA
;   ORGANISM: Homo sapiens
US-09-966-880A-11

  Query Match             0.7%;  Score 14.4;  DB 1;  Length 87;
  Best Local Similarity   65.6%;  Pred. No. 21;
  Matches   21;  Conservative    0;  Mismatches   11;  Indels    0;  Gaps    0;

Qy        227 GAAGGAACACAGGTCTGGCCAGGGACGTGCTG 258
              ||||  | |    ||||||| | ||| ||| |
Db         19 GAAGTGAGATTTTTCTGGCCTGAGACTTGCAG 50


RESULT 11
US-09-966-880A-14
; Sequence 14, Application US/09966880A
; GENERAL INFORMATION:
;  APPLICANT: Honjo, Tasuku
;  APPLICANT:  Muramatsu, Masamichi
;  TITLE OF INVENTION: NOVEL CYTIDINE DEAMINASE
;  FILE REFERENCE: 06501-088001
;  CURRENT APPLICATION NUMBER: US/09/966,880A
;  CURRENT FILING DATE:  2001-09-28
;  PRIOR APPLICATION NUMBER: PCT/JP00/01918
;  PRIOR FILING DATE: 2000-03-28
;  PRIOR APPLICATION NUMBER: JP 11-371382
;  PRIOR FILING DATE: 1999-12-27
;  PRIOR APPLICATION NUMBER: JP 11-178999
;  PRIOR FILING DATE: 1999-06-24
;  PRIOR APPLICATION NUMBER: JP 11-87192
;  PRIOR FILING DATE: 1999-03-29
;  NUMBER OF SEQ ID NOS: 36
;  SOFTWARE: FastSEQ for Windows Version 4.0
; SEQ ID NO 14
;   LENGTH: 116
;   TYPE: DNA
;   ORGANISM: Homo sapiens
US-09-966-880A-14

  Query Match             0.6%;  Score 13.8;  DB 1;  Length 116;
  Best Local Similarity   63.6%;  Pred. No. 30;
  Matches   21;  Conservative    0;  Mismatches   12;  Indels    0;  Gaps    0;

Qy       1545 AAGGATGGGGAAGCATTGCAAGGAAATTGTGCT 1577
              || |   ||||||   |||| | |||||  | |
Db         51 AAAGCCTGGGAAGGGCTGCATGAAAATTCAGTT 83


RESULT 12
US-09-966-880A-11/c
; Sequence 11, Application US/09966880A
; GENERAL INFORMATION:
;  APPLICANT: Honjo, Tasuku
;  APPLICANT:  Muramatsu, Masamichi
;  TITLE OF INVENTION: NOVEL CYTIDINE DEAMINASE
;  FILE REFERENCE: 06501-088001
;  CURRENT APPLICATION NUMBER: US/09/966,880A
;  CURRENT FILING DATE:  2001-09-28
;  PRIOR APPLICATION NUMBER: PCT/JP00/01918
;  PRIOR FILING DATE: 2000-03-28
;  PRIOR APPLICATION NUMBER: JP 11-371382
;  PRIOR FILING DATE: 1999-12-27
;  PRIOR APPLICATION NUMBER: JP 11-178999
;  PRIOR FILING DATE: 1999-06-24
;  PRIOR APPLICATION NUMBER: JP 11-87192
;  PRIOR FILING DATE: 1999-03-29
;  NUMBER OF SEQ ID NOS: 36
;  SOFTWARE: FastSEQ for Windows Version 4.0
; SEQ ID NO 11
;   LENGTH: 87
;   TYPE: DNA
;   ORGANISM: Homo sapiens
US-09-966-880A-11

  Query Match             0.6%;  Score 13.4;  DB 1;  Length 87;
  Best Local Similarity   52.7%;  Pred. No. 23;
  Matches   29;  Conservative    0;  Mismatches   26;  Indels    0;  Gaps    0;

Qy       1777 TCTTATTGTACATAAGTTTGTAAAAGAGTTAAAAATTGTTACTTCATGTATTCAT 1831
              |||| |||         |   ||   ||     |||| | | ||||||  || | ||
Db         63 TCTTCTTGCCTCCCTGCAAGTCTCAGGCCAGAAAAATCTCACTTCAATTAATGAT 9


RESULT 13
US-09-966-880A-13/c
; Sequence 13, Application US/09966880A
; GENERAL INFORMATION:
;  APPLICANT: Honjo, Tasuku
;  APPLICANT:  Muramatsu, Masamichi
;  TITLE OF INVENTION: NOVEL CYTIDINE DEAMINASE
;  FILE REFERENCE: 06501-088001
;  CURRENT APPLICATION NUMBER: US/09/966,880A
;  CURRENT FILING DATE:  2001-09-28
;  PRIOR APPLICATION NUMBER: PCT/JP00/01918
;  PRIOR FILING DATE: 2000-03-28
;  PRIOR APPLICATION NUMBER: JP 11-371382
;  PRIOR FILING DATE: 1999-12-27
;  PRIOR APPLICATION NUMBER: JP 11-178999
;  PRIOR FILING DATE: 1999-06-24
;  PRIOR APPLICATION NUMBER: JP 11-87192
;  PRIOR FILING DATE: 1999-03-29
;  NUMBER OF SEQ ID NOS: 36
;  SOFTWARE: FastSEQ for Windows Version 4.0
; SEQ ID NO 13
;   LENGTH: 271
;   TYPE: DNA
;   ORGANISM: Homo sapiens
US-09-966-880A-13

  Query Match             0.6%;  Score 13.4;  DB 1;  Length 271;
  Best Local Similarity   52.7%;  Pred. No. 41;
  Matches   29;  Conservative    0;  Mismatches   26;  Indels    0;  Gaps    0;

Qy        307 GAACTGCAGGACCTGGGAGCATCCTAAAGTGTCAACGTTTTTCTATGACTTTTAG 361
              ||||     |||  || |||| |     || ||| | ||      |  ||  | |||
Db         87 GAACCAGGTGACGCGGTAGCAGCGGCCAGGGTCTAGGTCCCAGTCCGAGATGTAG 33


RESULT 14
US-09-966-880A-13
; Sequence 13, Application US/09966880A
; GENERAL INFORMATION:
;  APPLICANT: Honjo, Tasuku
;  APPLICANT:  Muramatsu, Masamichi
;  TITLE OF INVENTION: NOVEL CYTIDINE DEAMINASE
;  FILE REFERENCE: 06501-088001
;  CURRENT APPLICATION NUMBER: US/09/966,880A
;  CURRENT FILING DATE:  2001-09-28
;  PRIOR APPLICATION NUMBER: PCT/JP00/01918
;  PRIOR FILING DATE: 2000-03-28
;  PRIOR APPLICATION NUMBER: JP 11-371382
;  PRIOR FILING DATE: 1999-12-27
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; PRIOR APPLICATION NUMBER: JP 11-178999
; PRIOR FILING DATE: 1999-06-24
; PRIOR APPLICATION NUMBER: JP 11-87192
; PRIOR FILING DATE: 1999-03-29
; NUMBER OF SEQ ID NOS: 36
; SOFTWARE: FastSEQ for Windows Version 4.0
; SEQ ID NO 13
; LENGTH: 271
; TYPE: DNA
; ORGANISM: Homo sapiens
US-09-966-880A-13

Query Match 0.6%; Score 12; DB 1; Length 271;
Best Local Similarity 48.5%; Pred. No. 42;
Matches 33; Conservative 0; Mismatches 35; Indels 0; Gaps 0;

```
Qy        522 CTCTTCCATCAGGCCATGATCTATAGGACCTCCTAATGAGAGTATCTGGGTGATTGTGAC 581
              | | |||   || || || |      |  | |   ||| |     ||   ||   | ||
Db         87 CACCTCCTGGAGCCCCTGCTACGACTGTGCCCGACATGTGGCCGACTTTCTGCGAGGGAA 146

Qy        582 CCCAAACC 589
              ||| ||||
Db        147 CCCCAACC 154
```

Search completed: March 10, 2004, 13:40:49
Job time : 19.5479 secs